

Notification Report for an Application to Change Conditions of a Resource Consent under Section 127 of the Resource Management Act 1991

Discretionary Activity under Section 127(3)

1. Application Description

Council Reference	SD1800110.04
Applicant	WFH Properties Limited
Description of Activity	To vary conditions of existing resource consent SD1800110, as subsequently varied by SD1800110.01, SD1800110.02 and SD1800110.03 so as to allow the proposal to change the scheme layout for Stages 8 and 9.
Site Address	One Tree Point Road, One Tree Point
Legal Description(s)	Lot 2000 DP 582536 (1090618)
Relevant Interests on Title	N/A – there are no relevant interests registered on the titles that will affect the proposal.
Site Area	16.11ha. (Total)
Zoning	General Residential Zone (GRZ)
Road Status	Pyle Road East (Access Road) One Tree Point Road (Primary Collector Road)
Overlays	Flood Susceptible Area (Partial)
Other Notations	N/A
National Policy Statement (NPS)	N/A
National Environmental Standard (NES)	NESCS – Permitted Activity NESFW – Permitted Activity

2. Locality Plan



Figure 1: Site Location (SOURCE: Whangarei District Council GIS)

3. The Proposal, Site and Locality Description

3.1 Proposal

The proposal is for a change to the consent conditions as previously approved under SD1800110, SD1800110.01, SD1800110.02 and SD1800110.03 P1157651 to allow a change to the layout for stages 8 and 9 with the intention of changing the staging of the subdivision creating stages 8a and b and 9. It is noted that the revised layout also includes the creation and vesting of the Road 10 connection to Pyle Road East from Kitemaunga Avenue, as part of Stage 8B.

Road 10 will be narrowed from 8.5m to 7.5m in width and a section of Pyle Road East (north of Road 10) will be reduced in width from and Roads 12 and 15 will be formed to Class A standard, Roads 14, 16 and 17 to Class B Standard.

Stormwater management within the site has been revised to account for both pre and post development scenarios.

The proposal has been prepared on behalf of the applicant by the following specialists:

- Section 127 application prepared by Alisa Neal (Barker and Associates – Agent for the Applicant) and titled: *Section 127 to Change Conditions of SD1800110 & SD1800110.01, P115765 Marsden, One Tree Point, One Tree Point 0118 Assessment of Environmental Effects and Statutory Analysis*, dated 14 March 2023.
- Plans prepared by Cook Costello including:
 - *Subdivision Staging Overview – Ref: 14335-009, Drawing DD220*
 - *Proposed Layout Stages 8a & 8b – Ref: 14665-009, Drawing DD201*
 - *Proposed Layout Stage 9 – Ref: 14355-009, Drawing DD202*

- *Roading Layout Overview – Ref. 14333-009, Drawing DD500*
- *Roading Layout Sheet 1 to 12 - Ref. 14333-009, Drawings DD501 - 512*
- *Stormwater Plan Overview – Ref. 14333-009, Drawing DD600*
- *Stormwater Plan Sheets 1 to 9 – Ref. 14333-009, Drawings DD601-609*
- *Stormwater Catchment Plan Sheets 1 to 4 – Ref 14333-009, drawings DD620-624*

All plans dated 07/12/2022, Revision A.

The submitted AEE provides a more detailed description of the proposal and additional detailed plans.

3.2 Site and Surrounding Environment Description

Melissa McGrath of Barker and Associates Limited has provided:

- a description of the proposal
- detailed variations to the condition(s) of consent, and
- described the subject site and its surroundings.

This information can be found on pages 8-33 of the Assessment of Environmental Effects (AEE) titled: *Section 127 to Change Conditions of SD1800110 & SD1800110.01, P115765 Marsden, One Tree Point, One Tree Point 0118*, prepared by Melissa McGrath and dated 14 March 2023.

I agree with the accuracy of this information.

4. Background

4.1 Specialist Input

The proposal has been reviewed and assessed by the following specialists:

- Whangarei District Council – Development Engineering – Alison Thompson
- Northland Transport Alliance – Road Safety and Traffic Engineering – Pat Sugrue
- Metis Consultants Ltd – Michael Arthur (stormwater)

4.2 Previous consents for the site

WFH Properties Limited, was granted resource consent for a combined Comprehensive Development Plan (CDP) consent and Subdivision consent for a 7-stage subdivision (Stages 3 - 9) (SD1800110). The consent approves both residential and commercial lots, and associated development of roading, recreation reserves and three waters infrastructure at One Tree Point Road. The comprehensive subdivision development is known as “The Landing” and is currently undergoing construction.

Subsequent to that approval several variations have been approved by Council:

- SD1800110.01 (approved 23/09/2019) for:
 - Under stage 3, changes to access arrangements, access lots and an additional jointly owned access lot.
 - Stage 4, adjustments to the areas around roundabouts, changes to access, and scheduling of lot development.
 - Stage 6, reduction in the number of Lots.

- SD1800110.02 and LU200161 (approved 21/12/2020) for:
 - Approval to develop residential units on Neighbourhood Commercial Zone land.
 - Stages 4 and 5, amendment to the scheme plan related to access and services.
- SD1800110.03 (approved 16/02/2022) for:
 - Stages 6-9 to split Stage 7 into two stages and remove Stages 6-9 from having frontage to Pyle Road East, relocation of jointly owned access lot, change to formation standards for internal roads.

4.3 Further Information

Further information was requested pursuant to Section 92 of the Resource Management Act 1991, which is detailed below:

Requested	Received
<p>17 April 2023 – email to Ms Alisa Neal (Agent for the Applicant – Barker and Associates.) requesting the following):</p> <p style="text-align: center;">Roading 1</p> <ol style="list-style-type: none"> 1. Why is the last bit of Road 10 (Kitemaunga) to be vested as part of stage 8b? Please justify. 2. If accepted how will the access onto Pyle Road East be restricted to public and how will this section of road be constructed considering its part of a future Round about? 3. We do not agree with the proposed amendments in terms of swale drains on both sides, this section of road shall be urbanized on the development frontage side, not swales. <p><u>Copied from application:</u> From the Pyle Road East/Road 10 intersection to northwestern extent of Stage 9 frontage of Lot 162 in accordance with Table 3.1 Class D C with regards to the sealing of the carriageway with swale drains either side.</p> <p style="text-align: center;">Stormwater design – General</p> <ol style="list-style-type: none"> 4. There does not appear to be a significant change in the stormwater network proposed under the S127 compared to previous submissions – but there is substantial change in the performance of the ponds (as per the comments below). This needs some commentary and justification. 5. The hydrology method is SCS with a Type 1A rainfall profile using HIRDS rainfall data for the RCP8.5 2081-2100 climate change scenario (approximately equivalent to current rainfall +20% as per the WDC the engineering standards). 6. The revised stormwater / hydrology report lacks enough detail to compare it to previous reports and understand why / how some changes have been made. It also lacks sufficient detail to assess the level of confidence in the results. Please provide a revised report that includes: 	<p>18 April 2023 – email from Ms. Neal providing an initial response to the further information requested by Council on 17 April 2023, which is provided below:</p> <ul style="list-style-type: none"> • We have some initial queries regarding the last comment around not accepting a new stormwater report because it is different to a previous stormwater report. We understand that the application needs to be assessed on its merits and in accordance with the District Plan, which the new stormwater report has been prepared in accordance with. We do not consider that Council can require consultation with other parties at this stage in the process, and consider that Council would need to deem other parties adversely affected by the proposal pursuant to s95 before requiring notification/consultation. • The stormwater report and associated onsite stormwater management has been designed in accordance with the requirements of the current District Plan and therefore acknowledge that there may be s92 requests that relate to this, including how compliance is achieved with the relevant rules, however, the matters below seem to extend beyond this. <p>8 June 2023 – email from Ms. Neal providing the response to the further information requested by Council on 17 April 2023, which included:</p> <ul style="list-style-type: none"> • <i>A revised AEE</i> • <i>Table of responses addressing each of the section 92 questions.</i> • <i>An engineering response</i> • <i>A legal letter regarding the content of the section 92 request.</i> <p>9 November 2023 – email from Ms. Neal in response further information requests:</p> <ul style="list-style-type: none"> • <i>Letter from Cook Costello addressing the stormwater response.</i>

<p>a. More detail on how the model has been schematised including representation of:</p> <p>i. Flow controls between storage elements & outfalls ii. Ponds – including overflow levels and controls</p> <p>b. Explanation of boundary conditions applied:</p> <p>i. Tide level at harbour discharge ii. Tail water level at Paper Road discharge</p> <p>c. Parameters and method used to estimate UHM Lag Time</p> <p>d. Testing the system to failure (the currently reporting shows that there is no discharge to the Paper Road up to the 1% AEP + CC event – but there is no testing of blockages or what return period storm would result in overflow)</p> <p>e. Sensitivity testing of key model parameters</p> <p>f. Commentary and justification of changes made in assumptions or input parameters between this report and previous reports</p> <p>g. Commentary on changes in outputs between this report and previous reports (in particular the change in predicted behaviour of the Pond 3 overflow)</p> <p>7. This is a significant change to the previous conclusions. There is significant range in the predictions – the previous report (Nov 2021) estimated peak flow 3.56m³/s for greenfield, new report estimates 2.866m³/s for 1%AEP + CC event.</p> <p>8. This is supported by a model created in Mike Urban+ software. The model consists of simple lumped hydrology with a basic representation of the ponds and overall site flow routing connectivity. It appears to be the same model used to inform the Nov 2021 report based on the schematics provided – but uses different pre-development catchment areas and produces quite different peak flow rates. Please clarify the reason for the change. Stormwater – Paper road/Marsden Cove outfall</p> <p>9. The revised stormwater report (March 2023) concludes there is an 80% reduction in flows down the Paper Road from pre-development to post-development conditions.</p> <p>10. The 900mm diameter pipe from Pond 3 to the Paper Road & south to the boundary is still proposed but not accepted at this stage as it's not clear how the volume will be controlled through this pipe and if it has been designed in accordance with the Woods report.</p> <p>11. Given the revised hydrology report concludes that Pond 3 no longer overflows under design conditions and recommends that “downstream development and an overland flow path be allowed for to the lower land in catchment BC-7 [Paper Road] in the event of an emergency blockage at the Harbour discharge location and potential for more frequent climate outlier events in the future.” – There is no clear need for the 900mm diameter pipe assuming a</p>	<p>19 December 2023 – email from Cook Costello attaching the newest model to address ‘many of the issues with the original including the terrain model, the different methods the ponds used, and the static Manning’s Values. The changes made yesterday to try to fix the 1d-2d mass balance error don’t seem to have helped and we would need to decouple the models again. Therefore it is something to do with the coupling of the models. Our view is these errors only work to make the model the most conservative as the volume of water is much larger than the rainfall event. They provide a source of error when using the models to simulate the real-world outcome. Over time, which unfortunately we do not have, we will figure these out and what is causing them.’</p> <p>20 December 2023 – updated memo and responses received from Cook Costello.</p> <p>Conclusions</p> <p>As can be seen in the above table, our model mostly aligns with the initial Woods Report. Minor variations in water levels are noted compared to the Woods Report calculations. We believe this is due to the Woods Report being a 1-dimensional model and simplifying the catchment to such a degree as to reduce accuracy. Additionally, some parameters may have been changed in the intervening 5 years since the Woods Report.</p> <p>Notably, Pond 2 is significantly lower than in the Hoppers Report model. We find it unusual that in the Woods Report Pond 2 has such a high water level as it is the pond closest to the outlet and therefore we would expect it to be the least restricted. Due to Pond 2 and Pond 3’s proximity to each other, they appear to be closely hydraulically linked and therefore their water levels would tend to equalise.</p> <p>The results of the sensitivity are reassuring. Moderate changes to the roughness and C value parameters caused very little difference to the critical parameters we measured. Minor increases to pond level and flow rate were expected.</p> <p>The Blocked Outlet results were also of note. The lessened flow from Pond 3 caused only minor changes to each of the other parameters while the overflow orifice still allowed water to exit the pond before it overtopped into neighbouring properties.</p> <p>15 January 2024 – Cook Costello response:</p> <p><i>I can confirm the ponds themselves are modelled separately from the surface 3d model.</i></p> <p><i>The pond volumes have been calculated off Lidar scans in conjunction with as-built information to account for these errors.</i></p> <p>18 January 2024 – Cook Costello Response Council email on 16 January on concern with model.</p> <p><i>It is agreed</i></p> <p><i>Outside of the consent conditions that:</i></p> <p><i>We will discuss this with DHI and update the model to remove the anomaly. We did not want to use a workaround to do this and have been discussing this with DHI (the writers of the software).</i></p> <p><i>This will be done by the end of March</i></p>
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<p>protected overland flow is provided (there is no overland flow shown on the most recent engineering drawings – but one is implied in Figure 2 of the Hydrology report). Please also assess the effects on downstream properties with the proposed overflow.</p> <p>12. A rough estimate of peak flow from the 0.92ha catchment discharging to the Paper Road as per the Woods report is approx. 0.142m³/s for the 1% AEP event with no climate change (based on the rainfall data used in 2018 – HIRDSv3). The March 2023 hydrology report shows peak flows of 0.18m³/s for the 50% AEP event with climate change – so even that is likely exceeding the consented catchment flows. Please demonstrate compliance with the Woods report as adjacent developments have relied on this report for their stormwater design.</p> <p>13. It would be reasonable to estimate range of possible flows from the 0.92ha catchment to accommodate parameter uncertainty to provide a target for the developer to achieve for discharging in this location</p> <p>The applicant was also advised that Council have approved 2 other large developments in the area based on the Woods report. One of these, Hoppers, have their construction well underway. These developments have based their stormwater design on the Woods report as they were also bound by the conditions of this report. Council accepted the Woods report and referred to it in the relevant consents granted to the developments adjacent to The Landing. Council will not accept deviations from the recommendations in the Woods report due to the impact on other developments. Should you wish to deviate from this you will need to work directly with any consent holders impacted by these variations. Council would then take this into consideration.</p> <p>11 July 2023 – further email response to email correspondence from Ms Neal:</p> <p><u>Procedural issues</u></p> <ul style="list-style-type: none"> • We confirm that the application was accepted for processing under S88 on 20/03/2023. • The legal letter provided by Mr Douch of Mortlock McCormack Law, 23 May 2023, suggests that Council refuses to continue to process the application based on the General Comments provided in the s92 request dated 17 April 2023. • The General Comments made in the s92 request are not intended as a request for information, nor a determination on notification nor the grant of the application and are not provided under s92. • It is common practice for Council's to provide additional recommendations within a s92 request for the applicant to consider, or provide an alternate means to assist with resolving some issues or providing support to the application overall. • It is merely a high-level suggestion to discuss the inconsistencies between the applicant's stormwater engineer assessments and those of 	
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<p>the adjacent Hopper development directly with them to try to reach some common understanding or agreement.</p> <p><u>Stormwater (SW) flows</u></p> <p>The s92 response has been reviewed by Michael Arthur of Metis Consultants Limited who provided the following summary on 4 July 2023:</p> <ul style="list-style-type: none"> ○ <i>The legal opinion around natural servitude is valid (upstream properties may continue to discharge at rates they had done historically, but not at increased rates)</i> ○ <i>The technical debate around what the historic rate likely was remains the crux of the issue for stormwater (as per previous discussions we have had on this)</i> ○ <i>The applicant still needs to provide further information on the hydrological model used to inform their March 2023 submission. Without this, WDC cannot rely on their evidence and make an informed (and ultimately defensible – as it is likely Marsden Cove will challenge) decision.</i> ○ <i>To be able to make this decision, WDC needs to have confidence in the robustness of the model results and the origins / accuracy of the data it based on – the current reporting provides neither of these things.</i> <p><i>The natural servitude argument only stands up if the discharge remains the same or is reduced from pre to post development scenarios. The process we need to go through to sort this out is:</i></p> <ol style="list-style-type: none"> 1. <i>Understand pre-development catchments & runoff (obtaining the data noted above is essential to do this – WFH datasets of unknown accuracy to arrive at their current positions)</i> 2. <i>Understand background to WFH hydrological model (as noted above)</i> 3. <i>Understand the opposition to changed flow regime into Marsden Cove (peak flow, water quality or both)</i> 4. <i>WFH / Marsden Cove possibly end up joint funding some form of infrastructure upgrade in Marsden Cove and / or supporting a negotiation to vary the discharge consent with NRC (standing by the Woods report is a tricky position to defend if steps 1 and 2 above do in fact demonstrate the catchment arrangement pre-development was wrong).</i> <p>My understanding is that any changes to the existing consent conditions on the stormwater discharge from WFH may have an impact on the NRC discharge permit held by Marsden Cove.</p> <p>Overall, the s92 request has not been satisfied and the original SW queries remain. The options to resolve this include a mediation between the stormwater engineers for the applicant and the Marsden Cove development, or</p>	
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limited notification so that this can occur through the RMA process where they can identify the adverse effects and work through a solution.

This is within scope of the s127 processing as it relates to an existing stormwater condition that references the Woods report that the applicant does not propose to comply with.

22 December 2023 – Metis further queries The vertical / horizontal accuracy of each dataset

The drone scan data has an accuracy of 1cm horizontally and 3cm vertically. Note that scan will likely pick up top of pond water and grassy areas so values may have additional errors. [MA] Noted – Please confirm if this was manually corrected in the pond depth-volume relationships (are the ponds modelled with live storage only and exclude normal standing water depth?)

16 January 2024 – WDC development engineering request:

As noted in Michael's review there is some uncertainty around the model still and council supports his recommendations as follows:

To accept the Cook Costello model with the following conditions:

- *Cook Costello retain any liability associated with the model and associated results until such time that they can have the model peer reviewed & all issues raised by the reviewer are resolved to the satisfaction of the reviewer*
- *The model is peer reviewed by an expert user of MIKE+ software;*
- *The peer review is completed, and all issues resolved by 31 March 2024 (to avoid this dragging out)*

If you are happy to accept these conditions we will release the decision.

The alternative is to withhold signoff until the review is complete.

5. Status of the Application

The proposed changes are considered to fall within the scope of the original resource consent for the proposed staged subdivision granted under SD1800110 and varied under SD1800110.01-.03.

As an application for a variation to conditions under s127 of the Resource Management Act 1991 (RMA), it is treated as if it is a discretionary activity.

Sections 88 to 121 apply, though all references to resource consent and activity are replaced with reference to the change or cancellation of the condition, and the resultant effects.

6. Public Notification Assessment (Sections 95A, 95C-95D)

Section 95A specifies the steps the council is to follow to determine whether an application is to be publicly notified. These steps are addressed in the statutory order below.

6.1 Step 1: Mandatory Public notification in Certain Circumstances

No mandatory notification is required as:

- the applicant has not requested that the application is publicly notified (s95A(3)(a));
- there are no outstanding or refused requests for further information (s95C and s95A(3)(b)); and
- the application does not involve any exchange of recreation reserve land under s15AA of the Reserves Act 1977 (s95A(3)(c)).

6.2 Step 2: If not required by step 1, public notification precluded in certain circumstances

The application is not precluded from public notification as:

- the activities are not subject to a rule or national environmental standard (NES) which precludes public notification (s95A(5)(a)); and
- the application does not exclusively involve one or more of the activities specified in s95A(5)(b).

6.3 Step 3: If not precluded by step 2, public notification required in certain circumstances

The application is not required to be publicly notified as the variation proposal is not subject to any rule or a NES that requires public notification (s95A(8)(a)).

The following assessment addresses the adverse effects of the activities on the environment, as public notification is required if the activities will have or are likely to have adverse effects on the environment that are more than minor (s95A(8)(b)).

6.3.1 Adverse Effects Assessment (s95A(8)(b) and 95D)

The consultant has provided, in accordance with schedule 4 of the RMA, an assessment of adverse environmental effects in such detail as corresponds with the scale and significance of the effects that the activities may have on the environment. This can be found on pages 34 - 41 of the AEE.

I concur with this assessment.

The AEE concludes that:

Built Character and Amenity

- The lot sized and shapes will not be changing under this application so there will be no change to future built form anticipated under the originally approved consent of subsequent variation to condition.

Stormwater

- The provision of infrastructure to service the development has been considered in the stormwater report prepared by Cook Costello. The report and associated drawings confirm that stormwater from the proposed subdivision can be adequately managed such that it is considered that less than minor adverse effects will result on the wider environment. In particular, a stormwater system is proposed to attenuate stormwater runoff to achieve 80% reduction in peak discharge for ARI events 2, 5, 10, and 100 years with consideration of climate change. The development has been designed to ensure that runoff is reduced to pre-development levels and any increased overland flow during storm events is directed away from any building platforms and adjoining properties. This aspect of the application was given further consideration as outlined in the s9 response section of this report above. Further details can also be found on Council's electronic file.

Roading and Traffic

- The Road 10 connection onto Pyle Road East will be utilised for construction vehicles only until such time that the required upgrades have taken place. An offered condition of consent will enforce that. These measures are anticipated to effectively manage the potential traffic effects whilst allowing for the use of the Pyle Road East corridor for construction vehicles and the staging of delivery of the subdivision.
- The proposal will result in a temporary increase in traffic usage of the Plover Street / One Tree Point Road intersection, however this is expected to be easily able to be catered by the existing road network.
- It is considered that the reduced road carriageway width is appropriate from a traffic engineering perspective as the class of road formation is considered to adequately accommodate the anticipated increase in traffic.

The roading and traffic aspects of the application have been assessed by ????

Overall, I agree with the AEE and conclude that any adverse effect from the variation to conditions will be less than minor.

6.4 Step 4: Public Notification in Special Circumstances

If an application has not been publicly notified as a result of any of the previous steps, then the council is required to determine whether special circumstances exist that warrant it being publicly notified (s95A(9)).

Special circumstances are those that are:

- Exceptional, abnormal or unusual, but something less than extraordinary or unique;
- outside of the common run of applications of this nature; or
- circumstances which make notification desirable, notwithstanding the conclusion that the activities will not have adverse effects on the environment that are more than minor.

In this instance I have turned my mind specifically to the existence of any special circumstances and conclude that there is nothing exceptional or unusual about the variation application, and that the proposal has nothing out of the ordinary run of things to suggest that public notification should occur.

6.5 Public Notification Conclusion

Having undertaken the s95A public notification tests, the following conclusions are reached:

- Under step 1, public notification is not mandatory.
- Under step 2, there is no rule or NES that specifically precludes public notification of the variation application, and the application is for activities other than those specified in s95A(5)(b).
- Under step 3, public notification is not required as the application is for activities that are not subject to a rule that specifically requires it, and it is considered that the activities will not have adverse effects on the environment that are more than minor.
- Under step 4, there are no special circumstances that warrant the variation application being publicly notified.

It is therefore recommended that this variation application be processed without public notification.

7. Limited Notification Assessment (Sections 95B, 95E-95G)

If the application is not publicly notified under s95A, the council must follow the steps set out in s95B to determine whether to limited notify the application. These steps are addressed in the statutory order below.

7.1 Step 1: Certain Affected Protected Customary Rights Groups must be Notified

There are no protected customary rights groups or customary marine title groups affected by the proposed activities (s95B(2)).

In addition, the council must determine whether the proposed activities are on or adjacent to, or may affect, land that is subject of a statutory acknowledgement under schedule 11, and whether the person to whom the statutory acknowledgement is made is an affected person (s95B(3)).

There are no Statutory Acknowledgments that apply to land within the Whangarei District; or land within an adjoining District adjacent to the subject site.

7.2 Step 2: If not required by step 1, limited notification precluded in certain circumstances

The application is not precluded from limited notification as:

- the application is not for one or more activities that are exclusively subject to a rule or NES which preclude limited notification (s95B(6)(a)); and
- the application is not exclusively for a controlled activity, other than a subdivision, that requires consent under a district plan (s95B(6)(b)).

7.3 Step 3: If not precluded by step 2, certain other affected persons must be notified

As this application is not for a boundary activity, there are no affected persons related to that type of activity (s95B(7)).

The following assessment addresses whether there are any affected persons that the application is required to be limited notified to (s95B(8)).

In determining whether a person is an affected person:

- a person is affected if adverse effects on that person are minor or more than minor (but not less than minor);
- adverse effects permitted by a rule in a plan or NES (the permitted baseline) may be disregarded; and
- the adverse effects on those persons who have provided their written approval must be disregarded.

In considering a variation application, the council must consider in particular every person who made a submission on the original application and who may be affected by the change or cancellation of that consent (s127(4)).

7.3.1 Adversely Affected Persons Assessment (s95B(8) and 95E)

The consultant has provided in accordance with Schedule 4 of the RMA, an assessment of adversely affected persons in such detail as corresponds with the scale and significance of the effects that the activities may have on persons in the surrounding environment. This includes particular analysis of those persons who made a submission on the original application.

The AEE concludes that:

- Roading and traffic matters were fully discussed in the public notification assessment and considered less than minor. That assessment is valid with regard adjacent properties also.
- The variation to the subdivision proposed has a similar scale and intensity to the consented development and no persons were considered adversely affected under previous applications.

In addition to the above, it is noted that a letter from representatives of the adjoining property was received expressing potential adverse effects. That matters raised in that letter were fully considered in the peer review of the submitted documentation. Information related to this can be found in Council's electronic file.

Overall, I agree with the AEE and conclude that any adverse effects to adjacent sites will be less than minor.

7.4 Step 4: Further Notification in Special Circumstances

In addition to the findings of the previous steps, the council is also required to determine whether special circumstances exist in relation to the variation application that warrant it being notified to any other persons not already determined as eligible for limited notification (excluding persons assessed under section 95E as not being affected persons).

Special circumstances are those that are:

- Exceptional, abnormal or unusual, but something less than extraordinary or unique;
- outside of the common run of applications of this nature; or
- circumstances which make limited notification to any other person desirable, notwithstanding the conclusion that no other person has been considered eligible.

In this instance I have turned my mind specifically to the existence of any special circumstances under s95B(10) and conclude that there is nothing exceptional or unusual about the variation application, and that the proposal has nothing out of the ordinary run of things to suggest that notification to any other persons should occur.

7.5 Limited Notification Conclusion

Having undertaken the s95B limited notification tests, the following conclusions are reached:

- Under step 1, limited notification is not mandatory.
- Under step 2, there is no rule or NES that specifically precludes limited notification of the variation application, and the application is for activities other than that specified in s95B(6)(b).
- Under step 3, limited notification is not required as it is considered that the variation application will not result in any adversely affected persons.
- Under step 4, there are no special circumstances that warrant the variation application being limited notified to any other persons.

It is therefore recommended that this variation application be processed without limited notification

8. Notification Recommendation

For the above reasons under Section 95A, this application may be processed without public notification.

In addition, under Sections 95B and 127(4), limited notification is not required.

Accordingly, I recommend that this application is processed non-notified.



Hamish Anderson
Consultant Senior Planner

Date: 5 February 2024

9. Notification Determination

Acting under delegated authority, and for the reasons set out in the above assessment and recommendation, under Sections 95A and 95C to 95D, and 95B and 95E to 95G of the RMA this application shall be processed non-notified.



Roger Quinton
Manager,
RMA Consents

Date: 9/2/2024

Decision Report on an Application to Change Conditions of a Resource Consent under Section 127 of the Resource Management Act 1991

Discretionary Activity under Section 127(3)

Application Details

Application number(s):	SD1800110.4
Original consent number(s):	SD1800110, SD1800110.01, SD1800110.02 and SD1800110.03 P1157651
Applicant:	WFH Properties Limited
Site Address:	One Tree Point Road, One Tree Point
Legal Description:	Lot 2000 DP 582536 (1090618)

Proposal:

To undertake a change to the consent conditions approved under SD1800110, SD1800110.01, SD1800110.02 and SD1800110.03 P1157651 so as to allow the proposal to change the scheme layout for Stages 8 and 9.

Change of Conditions

This discretionary activity under s127 of the Resource Management Act 1991 (RMA) is for changes to conditions of consent SD1800110 (as varied by SD1800110.01, SD1800110.02 and SD1800110.03 P1157651) involving the following amendments (with strikethrough for deletion, underline for insertions):

This discretionary activity under s127 of the Resource Management Act 1991 (RMA) is for changes to conditions of consent SD1800110 are highlighted by ~~strikethrough~~, **bold** and/or underline text.

Implementation Condition Relating to All Stages

- The subdivision shall be undertaken in general accordance with the plan of subdivision DWG No 31014-00-010-GE to 31014-00-016-GE Rev 1 dated 15/01/2018 prepared by WFH Properties Limited and including the following supporting documents, documents, except where superseded by the variations to approved consent SD1800110 including:*
 - The updated plans (Ref 14333-008 DWG Number SCH01, Rev E) prepared by Cook Costello Limited dated 31 January 2023 and the AEE prepared by Barker & Associates dated 14 March 2023.*
 - The updated Stormwater Report prepared by Cook Costello Limited dated 1 March 2023.*
 - The Civil Detail Design Plans titled "proposed civil detail design plans for WFH properties Ltd, The Landing, Stages 8A, 8B and 9, One Tree Point"; Job number 14333-008; Drawing numbers DD000-DD004, DD100-DD104, DD200-DD202.*

DD500-DD512, DD520-DD535, DD540 – DD553, DD560 – DD575, DD580 – DD598, DD600 – DD609, DD620 – DD624, DD630 – DD656, DD680 – DD691, Rev B, Dated 17 March 2023

Advice Note: As per the agreement via email of 16 January 2024 12:15PM from Alison.Thompson@wdc.govt.nz to Sammy@coco.co.nz and Phil@coco.co.nz, Cook Costello retains liability associated with the Stormwater model (MIKE+) and associated results that inform the Stormwater Report above, until such time that they have the model peer reviewed by an external reviewer expert in the use of MIKE+ software and all issues raised by the reviewer have been resolved to the satisfaction of the reviewer. The peer review is to be completed and all issues resolved by 31 March 2024.

Stage 8 A- 31 Residential Lots (lots 187 – 207, 214-221, 444, and 445), Recreation Reserve Lot 602, Roads to Vest (roads 15 and 16), JOAL Lot 704.

XX Prior to issue of a Section 223 certificate

- a The consent holder must submit an Inspection & Test Plan (ITP) for approval prepared in accordance with Council's Environmental Engineering Standards 2010 Edition and the WDC QA/QC Manual. The ITP is to be submitted to the Development Engineer or delegated representative for approval and be approved prior to the pre-start meeting and prior to any works being completed on the site. Note that this ITP will be processed in conjunction with the submitted engineering plans required by condition 18(a) and Council reserves the right to withhold ITP approval until the engineering plans are approved as these documents are to be read in conjunction with each other. (Refer to the advisory clause below for the web link to the WDC QA/QC Manual document).
- b The consent holder shall provide written confirmation from the telecommunications and power utility service operator of their consent conditions in accordance with Council's Environmental Engineering Standards 2010 Edition and show necessary easements on the survey plan to the approval of the Councils' Development Engineer or delegated representative.
- c The consent holder must create easements in gross over the proposed temporary turning head(s) to the satisfaction of the Development Engineer. The easements are to be sufficient to allow for the formal construction of the turning head and any associated underground services and footpaths should this become necessary. For clarity, this consent provides for the cancellation of easements (turning heads) when the future stage is lodged for Section 223 approval.
- d The consent holder must create easements over services and rights of way to the approval of the Development Engineer or delegated representative.
- e The consent holder must create easements over all proposed/existing Council services not located within 1.5m of the proposed property boundaries and/or as directed by the Development Engineer or delegated representative.
- f The consent holder must create easements in gross over all overland stormwater flow paths that fall into areas proposed for development (i.e. house site, effluent disposal site, accessway from road to house site etc.) and/or as directed by the Development Engineer. The easements are to cover the extent of the 1% Annual

Exceedance Probability flows (+20% allowance for climate change) and are to the satisfaction of the Development Engineer or delegated representative.

Note: Overland flowpaths are to be assessed in accordance with Section 4.9 of Council's Environmental Engineering Standards 2010 Edition and are to be certified by an IQP/CPEng.

g The consent holder must provide Council with three proposed street/road/access names in writing for all Roads to Vest within the stage boundaries in accordance with Council's policy, and in order of preference, giving reasons for each proposed name, for approval by Council. A clear plan detailing the route of the proposed street/road/access should also be submitted and any evidence of consultation relating to the proposed names. (Please refer to the road naming policy and guidelines available on Council's website www.wdc.govt.nz/).

Note: This condition will not be deemed to be satisfied unless Council has approved the submitted names in writing.

h The consent holder must provide Council with three proposed street/road/access names in writing for all private roads serving 5 or more lots within the stage boundaries in accordance with Council's policy, and in order of preference, giving reasons for each proposed name, for approval by Council. A clear plan detailing the route of the proposed street/road/access should also be submitted and any evidence of consultation relating to the proposed names. (Please refer to the road naming policy and guidelines available on Council's website www.wdc.govt.nz/).

Note: This condition will not be deemed to be satisfied unless Council has approved the submitted names in writing.

i The following conditions shall be shown on the survey plan and to be referenced LINZ 1507490:

"That Lot 704 hereon (Legal Access) be held as to ten undivided one-tenth shares by the owners of Lots 214, 215, 216, 217, 218, 220, 221, 444 and 445 hereon as tenants in common in the said shares and that individual Computer Registers be issued in accordance therewith".

i A detailed Landscape Planting Plan prepared by a qualified landscape architect shall be submitted and approved by Council's Manager RMA Consents or delegated representative. The plan shall provide details of landscape materials and planting within and around the ponds, drainage reserve and road verges; and shall also include any proposed signage, walkways, boardwalks, street furniture and entry features within reserve areas or road reserves where applicable. The plan shall show as a minimum the following;

i. Names of proposed species.

ii. Size of proposed stock for planting.

iii. Numbers, locations, spacing and staking of proposed plants and trees taking into account the need to retain suitable sight lines for traffic.

iv. Details of any structures including location, dimensions, materials and construction methods.

v. Details of any mulch or other stabilisation structures, including type, depth, and stabilisation methods; and shall include a weed management plan and a plant replacement program for maintenance of the asset until self sufficient or for three years following the issuance of a certificate under Section 224(c).

k The consent holder shall vest Lot 602 for Recreation Reserve under the Reserves Act 1977 and provide a detail Reserve Development Plan (RDP) for the approval of Council's Manager – Parks and Recreation. The RDP shall be prepared and developed in accordance with the latest version of Council's Environmental Engineering Standards – Reserves and Urban Design which include, but not be limited, to the following:

(i) Design Drawing and Specifications as public spaces;

(ii) Streetscape design;

(iii) Planting design (grassing, sowing and turfing, species selection, location of tree/plants size, irrigation, etc.);

(iv) Design of Landscape structures and furniture (play equipment, fencing etc.);

(v) Landscape works (earthworks, trees, soil testing, vehicle access barriers, fencing etc.);

(vi) Pedestrian Accessways;

(vii) Irrigation and fertilising;

(viii) Weed control; Pruning; Mulching; staking and protection; etc.;

(ix) Stormwater.

(x) Replacement planting; and

(xi) Construction and implementation programme.

XX Prior to issue of a Section 224 (c) certificate

a The Consent Holder or its agent/contractor shall, at least 10 working days prior to the commencement of any land disturbance activities, prepare and submit a Construction Environmental Management Plan (CEMP) to the Council's Team Leader RMA Approvals and Compliance or delegated representative. Information required in this application is listed in the NRC consent granted on 28.2.2018 File :13780

b The consent holder is to submit a Corridor Access Request application to Council's Road Corridor Co-ordinator and receive written approval for all works to be carried out within Council's Road Reserve in accordance with Council's Environmental Engineering Standards 2010 to the satisfaction of the Development Engineer or delegated representative (refer to the advisory clause below for the definition of a Corridor Access Request).

c A pre-start meeting is required to be undertaken with the consent holders' representative (DR), contractor(s) and all other IQP's or agents for consent holder and the Development Engineer prior to any works being undertaken on the site to the satisfaction of the Development Engineer or delegated representative.

d All work on the approved engineering plans in Condition 1 is to be carried out to the approval to the approval of the Development Engineer or delegated representative.

Compliance with this condition shall be determined by site inspections undertaken as agreed in the Inspection & Test Plan in Condition XX(a) and by provision and approval of supporting documentation provided by the developers representative/s in support of the constructed works – EES PS4 and producer statements including supporting evidence of inspections by those persons, works acceptance certificate, statement of compliance of as built works and as built plans, RAMM data, management plans, operation and maintenance plans and all other test certificates and statements and supporting information required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Environmental Engineering Standards 2010.

No construction works are to commence onsite until all engineering plan inspection fees have been paid.

e The consent holder shall notify Council, in writing, of their intention to begin works, a minimum of seven days prior to commencing works. Such notification shall be sent to the Development Engineer and include the following details:

i. Name and telephone number of the project manager/ IQP.

ii. Site address to which the consent relates.

iii. Activities to which the consent relates.

iv. Expected duration of works.

A copy of the approved engineering plans and a copy of the resource consent conditions, Inspection and Test Plan, approved corridor access request and the above letter are to be held onsite at all times during construction. All personnel working on the site shall be made aware of, and have access to the resource consent and accompanying documentation.

f The consent holder shall submit written confirmation from power and telecommunications utility services operators that their conditions for this development have been satisfied in accordance with Council's Environmental Engineering Standards 2010 Edition to the approval of the Council's Development Engineer or their delegated representative.

g The consent holder shall ensure that spoil from the site must not be tracked out onto Council or State Highway Road formations to the satisfaction of the Development Engineer or delegated representative.

h Dust nuisance must be controlled onsite (by use of a water cart or similar) by the applicant so as not to cause "offensive or objectionable" dust at or beyond the boundary of the development of the Development Engineer or delegated representative.

i The consent holder must provide written confirmation from a Licensed Cadastral Surveyor that all services and accesses are located within the appropriate easement boundaries to the satisfaction of the Development Engineer or delegated representative.

j The consent holder must reinstate Council's street footpath, stormwater kerb and channel, road carriageway formation, street berm and urban services by the demolition and construction works associated with the subdivision and land use activities shall be reinstated in accordance with Section 3 of Council's Environmental

- Engineering Standards 2010 Edition at the expense of the consent holder to the satisfaction of the Development Engineer or delegated representative.
- k The consent holder must submit a certified and dated 'as built' plan of completed works and services in accordance with Council's Environmental Engineering Standards 2010 Edition. This condition shall be deemed satisfied once the as-builts have been approved by Council's Development Engineer or delegated representative.
- l The consent holder must submit certified RAMM data for all new/upgraded or extended vehicle crossing culverts prepared by a suitably qualified person in accordance with Council's Environmental Engineering Standards 2010 Edition to the satisfaction of the Development Engineer or delegated representative.
- m The consent holder must supply and erect the Public street/road/access name for all Public Roads within the stage boundary in accordance with Sheet 24 of Council's Environmental Engineering Standards 2010 Edition, inclusive of the approved street/road/access name. The sign shall be located in a position where it is most visible for road users to the satisfaction of the Development Engineer or delegated representative.
- n The consent holder must supply and erect the Private street/road/access name for all private roads/ JOAL within the stage boundaries in accordance with Sheet 25 of Council's Environmental Engineering Standards 2010 Edition, inclusive of the approved street/ road/access name. The sign shall be located in a position where it is most visible for road users to the satisfaction of the Development Engineer or delegated representative.
- o The consent holder must submit for approval a completed Geotechnical report including a detailed site plan of any areas of filling, from a Geotechnical Engineer specifying any site restrictions, and confirmation that the land is suitable for building development to the satisfaction of the Development Engineer or delegated representative.
- p If filling were to occur on any allotment, the consent holder shall submit a Form EES PS4 compiled by a suitably qualified person including details confirming the location of such fill on the affected titles, to the satisfaction of the Development Engineer, or delegated representative. This Form EES PS4 (and associated reports, plans and similar) will be registered against the relevant titles via a consent notice.
- q Following completion of construction, the consent holder shall provide a works producer statement from the suitably qualified contractors who completed the works, certifying that the works have been completed in accordance with the approved engineering plans, Council's Environmental Engineering Standards 2010 Edition and best trade practise, to the satisfaction of Whangarei District Council's Development Engineer or delegated representative.
- r The consent holder shall complete all landscape works required by condition XX(j) of this consent to the satisfaction of the Team Leader RMA Approvals and Compliance or their delegated representative. Confirmation shall be provided by way of written evidence from a landscape architect and a site visit by a member of the Parks Department of the Council or their delegated representative.

- s The consent holder shall provide evidence from a suitably qualified professional that the Park and Recreational Development Plan approved under condition XX(j) has been implemented.
- t Pursuant to Section 221 of the Resource Management Act 1991, a consent notice must be prepared and be registered on the Computer Freehold Register of **187-207, 214-221, 444 and 445** at the consent holder's expense, containing the following conditions which are to be complied with on a continuing basis by the subdividing owner and subsequent owners:
- i At the time of building consent provide suitable evidence/design to illustrate that, stormwater attenuation will be provided for all impervious surfaces exceeding 45% of the lot size area, to ensure compliance with Council's Environmental Engineering Standards 2010 and to the satisfaction of the Whangarei District Council. The design shall be undertaken by a suitably qualified engineer or Council IQP.
 - ii Any development shall comply with the restrictions and recommendations identified in the Geotechnical completion engineering report (with appropriate references and to be dated) as required under condition 21(o) unless an alternative engineering report prepared by a Geotechnical or Chartered Professional Engineer is approved in writing by Council.
 - iii At the time of building consent, the property owner shall arrange to supply and install (at its own cost) a pressure sewer system of an approved make, brand or type (including all its constituent components) to the satisfaction of Council. After approval by WDC Waste and Drainage Manger, and connection of the pressure sewer system to the Council's reticulated system, WDC shall own and maintain the pressure sewer system in accordance with the WDC Pressure Sewer Policy. The Owner shall continue to own and maintain the property's gravity drain to the pump chamber. The Owner shall be responsible for paying for the power consumption of the pumping unit in accordance with Council Pressure Sewer Policy.
 - iv At the time of building consent, the owner shall construct the vehicle entrance crossing in accordance with Sheet 18 Residential Single Width Crossing also in accordance with Sheets 22 & 23 of Council's Environmental Engineering Standards 2010 Edition. Unless an existing approved vehicle crossing to the site exist. Entrance crossings are to be designed and constructed in such a manner that will control stormwater run-off entering a property from the road, and that likewise prevent stormwater and detritus, including gravel, dirt and other materials, migrating onto the road reserve from a property.

Stage 8B - 42 Residential Lots (lots 121-129, 139-147, 153-183), Roads to Vest (roads 10, 12, 14 and 17) and recreation reserve Lot 553 (stormwater pond).

XX Prior to issue of a Section 223 certificate

- a The consent holder must submit an Inspection & Test Plan (ITP) for approval prepared in accordance with Council's Environmental Engineering Standards 2010 Edition and the WDC QA/QC Manual. The ITP is to be submitted to the Development Engineer or delegated representative for approval and be approved prior to the pre-start meeting and prior to any works being completed on the site. Note that this ITP will be processed in conjunction with the submitted engineering plans

required by condition 20(a) and Council reserves the right to withhold ITP approval until the engineering plans are approved as these documents are to be read in conjunction with each other. (Refer to the advisory clause below for the web link to the WDC QA/QC Manual document).

- b The consent holder shall provide written confirmation from the telecommunications and power utility service operator of their consent conditions in accordance with Council's Environmental Engineering Standards 2010 Edition and show necessary easements on the survey plan to the approval of the Council's Development Engineer or delegated representative.
- c The consent holder must create easements in gross over the proposed temporary turning head(s) to the satisfaction of the Development Engineer. The easements are to be sufficient to allow for the formal construction of the turning head and any associated underground services and footpaths should this become necessary. For clarity, this consent provides for the cancellation of easements (turning heads) when the future stage is lodged for Section 223 approval.
- d The consent holder must create easements over services and rights of way to the approval of the Development Engineer or delegated representative.
- e The consent holder must create easements over all proposed/existing Council services not located within 1.5m of the proposed property boundaries and/or as directed by the Development Engineer or delegated representative.
- f The consent holder must create easements in gross over all overland stormwater flow paths that fall into areas proposed for development (i.e. house site, effluent disposal site, accessway from road to house site etc.) and/or as directed by the Development Engineer. The easements are to cover the extent of the 1% Annual Exceedance Probability flows (+20% allowance for climate change) and are to the satisfaction of the Development Engineer or delegated representative.

Note: Overland flowpaths are to be assessed in accordance with Section 4.9 of Council's Environmental Engineering Standards 2010 Edition and are to be certified by an IQP/CPEng.

- g The consent holder must provide Council with three proposed street/road/access names in writing for all Roads to Vest within the stage boundaries in accordance with Council's policy, and in order of preference, giving reasons for each proposed name, for approval by Council. A clear plan detailing the route of the proposed street/road/access should also be submitted and any evidence of consultation relating to the proposed names. (Please refer to the road naming policy and guidelines available on Council's website www.wdc.govt.nz/).

Note: This condition will not be deemed to be satisfied unless Council has approved the submitted names in writing.

- h The consent holder must provide Council with three proposed street/road/access names in writing for all private roads serving 5 or more lots within the stage boundaries in accordance with Council's policy, and in order of preference, giving reasons for each proposed name, for approval by Council. A clear plan detailing the route of the proposed street/road/access should also be submitted and any evidence of consultation relating to the proposed names. (Please refer to the road naming policy and guidelines available on Council's website www.wdc.govt.nz/).

Note: This condition will not be deemed to be satisfied unless Council has approved the submitted names in writing.

- i A detailed Landscape Planting Plan prepared by a qualified landscape architect shall be submitted and approved by Council's Manager RMA Consents or delegated representative. The plan shall

provide details of landscape materials and planting within and around the ponds, drainage reserve and road verges; and shall also include any proposed signage, walkways, boardwalks, street furniture and entry features within reserve areas or road reserves where applicable. The plan shall show as a minimum the following;

i. Names of proposed species.

ii. Size of proposed stock for planting.

iii. Numbers, locations, spacing and staking of proposed plants and trees taking into account the need to retain suitable sight lines for traffic.

iv. Details of any structures including location, dimensions, materials and construction methods.

v. Details of any mulch or other stabilisation structures, including type, depth, and stabilisation methods; and shall include a weed management plan and a plant replacement program for maintenance of the asset until self sufficient or for three years following the issuance of a certificate under Section 224(c).

XX Prior to issue of a Section 224 (c) certificate

a At least 10 working days prior to the commencement of construction works onsite, the Consent Holder shall provide a Construction Management Plan (CMP) to Councils Manager RMA consents for certification. The objective of the CMP is to outline the approach to be taken for the managing of construction works within Pyle Road East and in proximity to the Road 10 intersection to ensure that impacts that may arise from the works have been appropriately identified, managed and minimised.

The CMP shall include but not limited to:

- Details of the works, intended construction timetable (including staging) and hours of operation;
- Contact details of the person in charge of construction works or other person responsible for implementing this Plan;
- Methods to control dust, debris on roads and silt laden runoff during construction;
- Erosion and sediment control measures to avoid adverse offsite effects arising from the earthworks construction works;
- Details of any existing network utilities on the site and how they will be protected and accessed during construction activities;
- A Traffic Management Plan, including but not limited to:
 - Routes to be used by construction traffic to access and egress the site and to minimise movements onto the public road network.
 - Site access and management, including proposed methods to restrict and/or limit access from public onto Pyle Road East until such time that the road upgrades required as part of Stage 9 of the subdivision are completed.
 - Access points for construction vehicles onto and off the road network from the site and Pyle Road East, and measures to be adopted at these access points to ensure a safe traffic environment for other road users, including pedestrians and cyclists.
 - On-site parking for contractor vehicles thereby ensuring on-street parking is avoided.

- Quality assurance/quality control;
- General methods to mitigate and manage construction noise and vibration in order to comply with the applicable noise limits;
- Adjacent land owner and occupier liaison during the construction stage;
- Details as to how and when the property owners along Pyle Road East will be consulted with relating to construction works within the road corridor and associated access restrictions.

- Complaints handling procedure; and
- Any necessary health and safety requirements.

b The consent holder shall implement the certified CMP (condition XX(a) until the completion of the construction works associated with stages 8b and 9.

c Any changes to the CMP shall be made in accordance with the methodology and certified procedures in that plan shall be confirmed in writing by the Consent Holder following consultation with the Manager RMA consents (or nominee) before implementation. The Construction Management Plan shall be updated as required to cover each development stage and progress of construction onsite.

d The consent holder is to submit a Corridor Access Request application to Council's Road Corridor Co-ordinator and receive written approval for all works to be carried out within Council's Road Reserve in accordance with Council's Environmental Engineering Standards 2010 to the satisfaction of the Development Engineer or delegated representative (refer to the advisory clause below for the definition of a Corridor Access Request).

e A pre-start meeting is required to be undertaken with the consent holders' representative (DR), contractor(s) and all other IQP's or agents for consent holder and the Development Engineer prior to any works being undertaken on the site to the satisfaction of the Development Engineer or delegated representative.

f All work on the approved engineering plans in Condition 1 is to be carried out to the approval to the approval of the Development Engineer or delegated representative.

Compliance with this condition shall be determined by site inspections undertaken as agreed in the Inspection & Test Plan in Condition XX(a) and by provision and approval of supporting documentation provided by the developers representative/s in support of the constructed works – EES PS4 and producer statements including supporting evidence of inspections by those persons, works acceptance certificate, statement of compliance of as built works and as built plans, RAMM data, management plans, operation and maintenance plans and all other test certificates and statements and supporting information required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Environmental Engineering Standards 2010.

No construction works are to commence onsite until the engineering plans required in condition XX(a) have been approved and all associated plan inspection fees have been paid.

g The consent holder shall notify Council, in writing, of their intention to begin works, a minimum of seven days prior to commencing works. Such notification shall be sent to the Development Engineer and include the following details:

- i. Name and telephone number of the project manager/ IQP.
- ii. Site address to which the consent relates.

iii. Activities to which the consent relates.

iv. Expected duration of works.

A copy of the approved engineering plans and a copy of the resource consent conditions, Inspection and Test Plan, approved corridor access request and the above letter are to be held onsite at all times during construction. All personnel working on the site shall be made aware of, and have access to the resource consent and accompanying documentation.

- h The consent holder shall submit written confirmation from power and telecommunications utility services operators that their conditions for this development have been satisfied in accordance with Council's Environmental Engineering Standards 2010 Edition to the approval of the Council's Development Engineer or their delegated representative.
- i The consent holder shall ensure that spoil from the site must not be tracked out onto Council or State Highway Road formations to the satisfaction of the Development Engineer or delegated representative.
- j Dust nuisance must be controlled onsite (by use of a water cart or similar) by the applicant so as not to cause "offensive or objectionable" dust at or beyond the boundary of the development of the Development Engineer or delegated representative.
- k The consent holder must provide written confirmation from a Licensed Cadastral Surveyor that all services and accesses are located within the appropriate easement boundaries to the satisfaction of the Development Engineer or delegated representative.
- l The consent holder must reinstate Council's street footpath, stormwater kerb and channel, road carriageway formation, street berm and urban services by the demolition and construction works associated with the subdivision and land use activities shall be reinstated in accordance with Section 3 of Council's Environmental Engineering Standards 2010 Edition at the expense of the consent holder to the satisfaction of the Development Engineer or delegated representative.
- m The consent holder must submit a certified and dated 'as built' plan of completed works and services in accordance with Council's Environmental Engineering Standards 2010 Edition. This condition shall be deemed satisfied once the as-builts have been approved by Councils' Development Engineer or delegated representative.
- n The consent holder must submit certified RAMM data for all new/upgraded or extended vehicle crossing culverts prepared by a suitably qualified person in accordance with Council's Environmental Engineering Standards 2010 Edition to the satisfaction of the Development Engineer or delegated representative.
- o The consent holder must supply and erect the Public street/road/access name for all Public Roads within the stage boundary in accordance with Sheet 24 of Council's Environmental Engineering Standards 2010 Edition, inclusive of the approved street/ road/access name. The sign shall be located in a position where it is most visible for road users to the satisfaction of the Development Engineer or delegated representative.
- p The consent holder must submit for approval a completed Geotechnical report including a detailed site plan of any areas of filling, from a Geotechnical Engineer specifying any site restrictions, and confirmation that the land is suitable for building development to the satisfaction of the Development Engineer or delegated representative.
- q If filling were to occur on any allotment, the consent holder shall submit a Form EES PS4 compiled by a suitably qualified person including details confirming the location of such fill on the affected titles, to

the satisfaction of the Development Engineer, or delegated representative. This Form EES PS4 (and associated reports, plans and similar) will be registered against the relevant titles via a consent notice.

r Following completion of construction, the consent holder shall provide a works producer statement from the suitably qualified contractors who completed the works, certifying that the works have been completed in accordance with the approved engineering plans, Council's Environmental Engineering Standards 2010 Edition and best trade practise, to the satisfaction of Whangarei District Council's Development Engineer or delegated representative.

s The consent holder shall complete all landscape works required by condition XX(j) of this consent to the satisfaction of the Team Leader RMA Approvals and Compliance or their delegated representative. Confirmation shall be provided by way of written evidence from a landscape architect and a site visit by a member of the Parks Department of the Council or their delegated representative.

t The consent holder shall provide evidence from a suitably qualified professional that the Park and Recreational Development Plan approved under condition 16(l) has been implemented.

u Pursuant to Section 221 of the Resource Management Act 1991, a consent notice must be prepared and be registered on the Computer Freehold Register of **121-129, 139-147 and 153 -183** at the consent holder's expense, containing the following conditions which are to be complied with on a continuing basis by the subdividing owner and subsequent owners:

i At the time of building consent provide suitable evidence/design to illustrate that, stormwater attenuation will be provided for all impervious surfaces exceeding 45% of the lot size area, to ensure compliance with Council's Environmental Engineering Standards 2010 and to the satisfaction of the Whangarei District Council. The design shall be undertaken by a suitably qualified engineer or Council IQP.

ii Any development shall comply with the restrictions and recommendations identified in the Geotechnical completion engineering report (with appropriate references and to be dated) as required under condition XX(o) unless an alternative engineering report prepared by a Geotechnical or Chartered Professional Engineer is approved in writing by Council.

iii At the time of building consent, the property owner shall arrange to supply and install (at its own cost) a pressure sewer system of an approved make, brand or type (including all its constituent components) to the satisfaction of Council. After approval by WDC Waste and Drainage Manger, and connection of the pressure sewer system to the Council's reticulated system, WDC shall own and maintain the pressure sewer system in accordance with the WDC Pressure Sewer Policy. The Owner shall continue to own and maintain the property's gravity drain to the pump chamber. The Owner shall be responsible for paying for the power consumption of the pumping unit in accordance with Council Pressure Sewer Policy.

iv At the time of building consent, the owner shall construct the vehicle entrance crossing in accordance with Sheet 18 Residential Single Width Crossing also in accordance with Sheets 22 & 23 of Council's Environmental Engineering Standards 2010 Edition. Unless an existing approved vehicle crossing to the site exist. Entrance crossings are to be designed and constructed in such a manner that will control stormwater run-off entering a property from the road, and that likewise prevent stormwater and detritus, including gravel, dirt and other materials, migrating onto the road reserve from a property.

v The consent holder shall prepare a fencing covenant as defined under Section 2 of the Fencing Act 1978 to be registered against all residential allotments to be created adjoining the stormwater Lot 553 as reserve to vest (excluding road reserve), specifying that Council will not be liable for any costs for future fencing of boundaries with any pond. In addition, the boundary fencing adjoining the pond to

vest (excluding road reserve) above a height of 1.2m shall be constructed in visually permeable materials that allow visibility into the reserve. Details of proposed fencing shall be provided to Council's Parks and Recreation Manager for approval prior to construction.

Stage 9 - ~~48 38~~ residential lots (lots 162-164, 167-168, 171-172 ~~0-173~~, ~~175-183~~, 222-234, 237, 334-335, 338-339, ~~342-343~~, 346-347, 350-351, 354-355, 358-~~359~~, ~~360~~ & 446 & 450-451), ~~Pond Lot 553~~, Roads to Vest (road ~~17s 12, 14, and 16~~)

XX 18 Prior to issue of a Section 223 certificate

a ~~The consent holder must submit a detailed set of engineering plans prepared in accordance with Council's Environmental Engineering Standards 2010 Edition. The engineering plans are to be submitted to the Development Engineer for approval.~~

~~It is to be noted that certain designs may only be carried out by an Independently Qualified Person (IQP) or Chartered Professional Engineer (CPEng) working within the bounds of their assessed competencies. IQP's must have been assessed by Council and hold a current status to submit design work.~~

~~All work needing design/certification by a Council approved IQP/CPEng will require completion of a producer statement (design) (EES-PS1 or similar).~~

~~Plans are to include but are not limited to:-~~

~~i—Design details of final earthworks and retaining to construct roads, lot platforms and ponds, in accordance with Council's Environmental Engineering Standards 2010 Edition, including existing and proposed contours and depths of cut/fill. The earthworks plan shall include:-~~

- ~~•—Environmental Management Plan~~
- ~~•—Construction Management Plan~~
- ~~•—Specific Dust Management Plan~~
- ~~•—Erosion and Sediment Control Plan~~

~~ii—Design details of the construction of a new vehicle crossing where site restrictions apply, in accordance with Sheet 18 Residential Single Width Crossing also in accordance with Sheets 22 & 23 of Council's Environmental Engineering Standards 2010 Edition. Entrance crossings are to be designed and constructed in such a manner that will control stormwater run-off entering a property from the road, and that likewise prevent stormwater and detritus, including gravel, dirt and other materials, migrating onto the road reserve from a property. Urban accessways and private driveways sloping up from the road shall have a stormwater collection and disposal system at the boundary as detailed on Sheet 19.~~

~~iii—Design details of Roads 0, 12 and 17 to vest where Road 10 shall be in accordance with Table 3.1 Class D, and Roads 10 and 12 shall be in accordance with Class A (cul-de-sac) road in Table 3.1 of Council's Environmental Engineering Standards 2010 Edition.~~

~~The design shall include pavement structural details, signage, intersection design, typical cross-sections, earthworks cross sections, long sections, culverts, drainage flow paths, surfacing, pavement marking, street lighting and any proposed planting, landscaping, retaining and street furniture and a temporary metalled turning head with an easement in gross in favour of Whangarei District Council.~~

- ~~The design shall specifically address the reduced road widths to Class A extending from any existing intersection and/or any existing formed road stub by either:-~~
- ~~a) Reconstructing any existing stub to a Class A carriageway from the intersection; or,~~
 - ~~b) Providing details to the satisfaction of the Council as to how a suitable design can be tapered and integrated where two joining road formations with different carriageway widths can be accommodated, inclusive of landscaping, parking, and other required features.~~
- ~~iv Design details of the upgrade of Pyle Road East from the existing edge of seal to the cul-de-sac at the end of the road, including:~~
- ~~• From the cul-de-sac to Road 10 intersection designed in accordance with Table 3.1 Class B~~
 - ~~• From the Pyle Road East/Road 10 intersection to northwestern extent of Stage 9 frontage of Lot 162 in accordance with Table 3.1 Class D.~~
 - ~~• For the remainder of the unsealed road in accordance with Table 3.2 Class C and Section 3 of Council's Environmental Engineering Standards 2010 Edition including pavement structural details, signage, intersection design, typical cross sections, earthworks cross sections, long sections, culverts, drainage flow paths, surfacing, pavement marking, street lighting and any proposed planting, landscaping, retaining and street furniture.~~
- ~~v Design details of the Pressure Sewer System reticulation including detail of the discharge point or receiving manhole with upgrades (if required) to accommodate the new connection. The sewer reticulation main shall not be constructed through private land.~~
- ~~Appurtenances (such as valves and flushing points) and boundary kits for all lots serviced by the pressure sewer system.~~
- ~~Supporting calculations in accordance with Section 5 of Council's Environmental Engineering Standards 2010 Edition.~~
- ~~Calculation and details of how self-cleansing velocities, residence times and odour control will be achieved prior to full build-out of the lots.~~
- ~~Note: During the design process the developer shall confirm with Council the nominated discharge point on the Council's existing system that the developer needs to convey sewage to.~~
- ~~vi Design details of water connections for all residential lots within the stage boundary in accordance with Sheet 46 or 47 of Council's Environmental Engineering Standards 2010 Edition including firefighting coverage in accordance with Sheet 45 and Section 6.11.~~
- ~~vii Design details of water main extensions inclusive of any valves, bulk water meters, fittings and connections necessary to service all residential lots, inclusive of calculations in accordance with Section 6 of Council's Environmental Engineering Standards 2010 Edition.~~
- ~~viii Design details of stormwater connections for all residential lots within the stage boundary in accordance with Sheet 36 or 37 and Section 4 of Council's Environmental Engineering Standards 2010 Edition.~~
- ~~ix Design details of stormwater mainline reticulation inclusive of any upgrades to the existing reticulation, sumps, manholes, treatment devices, detention structures and connections necessary to service the development in accordance with Section 4 of Council's Environmental Engineering Standards 2010 Edition. The design is to include evidence that~~

- ~~• The existing public reticulation is capable of receiving the additional flows; and~~
- ~~• The new system is capable of receiving stormwater from further upstream development (where applicable)~~
- ~~• Include recommendations from the Opus Acid Sulphate Soil Report dated 25 August 2016 reference 1-19563.~~

~~Note: Stormwater discharges across Public Reserve will require specific approval in writing from the controlling authority prior to submission of engineering plans.~~

- b The consent holder must submit an Inspection & Test Plan (ITP) for approval prepared in accordance with Council's Environmental Engineering Standards 2010 Edition and the WDC QA/QC Manual. The ITP is to be submitted to the Development Engineer for approval and be approved prior to the pre-start meeting and prior to any works being completed on the site. Note that this ITP will be processed in conjunction with the submitted engineering plans required by condition 18(a) and Council reserves the right to withhold ITP approval until the engineering plans are approved as these documents are to be read in conjunction with each other. (Refer to the advisory clause below for the web link to the WDC QA/QC Manual document).
- c The consent holder shall provide written confirmation from the telecommunications and power utility service operator of their consent conditions in accordance with Council's Environmental Engineering Standards 2010 Edition and show necessary easements on the survey plan to the approval of the Councils' Development Engineer or delegated representative.
- d The consent holder must create easements over services and rights of way to the approval of the Development Engineer or delegated representative.
- e The consent holder must create easements over all proposed/existing Council services not located within 1.5m of the proposed property boundaries and/or as directed by the Development Engineer or delegated representative.
- f The consent holder must create easements in gross over all overland stormwater flow paths that fall into areas proposed for development (i.e. house site, effluent disposal site, accessway from road to house site etc.) and/or as directed by the Development Engineer or delegated representative. The easements are to cover the extent of the 1% Annual Exceedance Probability flows (+20% allowance for climate change) and are to the satisfaction of the Development Engineer or delegated representative.

Note: Overland flowpaths are to be assessed in accordance with Section 4.9 of Council's Environmental Engineering Standards 2010 Edition and are to be certified by an IQP/CPEng.

- g The consent holder must provide Council with three proposed street/road/access names in writing for all Roads to Vest within the stage boundaries in accordance with Council's policy, and in order of preference, giving reasons for each proposed name, for approval by Council. A clear plan detailing the route of the proposed street/road/access should also be submitted and any evidence of consultation relating to the proposed names. (Please refer to the road naming policy and guidelines available on Council's website www.wdc.govt.nz/).

Note - This condition will not be deemed to be satisfied unless Council has approved the submitted names in writing.

- h A detailed Landscape Planting Plan prepared by a qualified landscape architect shall be submitted and approved by Council's Manager RMA Consents or delegated representative. The plan shall provide details of landscape materials and planting within and around the ponds, drainage reserve and road verges; and shall also include any proposed signage, walkways, boardwalks, street furniture and entry features within reserve areas or road reserves where applicable. The plan shall show as a minimum the following;*
- i. Names of proposed species.*
 - ii. Size of proposed stock for planting.*
 - iii. Numbers, locations, spacing and staking of proposed plants and trees taking into account the need to retain suitable sight lines for traffic.*
 - iv. Details of any structures including location, dimensions, materials and construction methods.*
 - v. Details of any mulch or other stabilisation structures, including type, depth, and stabilisation methods; and shall include a weed management plan and a plant replacement program for maintenance of the asset until self sufficient or for three years following the issuance of a certificate under Section 224(c).*

2319 Prior to issue of a Section 224 (c) certificate;

- a The Consent Holder or its agent/contractor shall, at least 10 working days prior to the commencement of any land disturbance activities, prepare and submit a Construction Environmental Management Plan (CEMP) to the Council's Team Leader RMA Approvals and Compliance or delegated representative. Information required in this application is listed in the NRC consent granted on 28.2.2018 File :13780*
- b The consent holder is to submit a Corridor Access Request application to Council's Road Corridor Co-ordinator and receive written approval for all works to be carried out within Council's Road Reserve in accordance with Council's Environmental Engineering Standards 2010 to the satisfaction of the Development Engineer or delegated representative (refer to the advisory clause below for the definition of a Corridor Access Request).*
- c A pre-start meeting is required to be undertaken with the consent holders' representative (DR), contractor(s) and all other IQP's or agents for consent holder and the Development Engineer prior to any works being undertaken on the site to the satisfaction of the Development Engineer or delegated representative.*
- d All work on the approved engineering plans in Condition 118(a) is to be carried out to the approval to the approval of the Development Engineer or delegated representative.*

Compliance with this condition shall be determined by site inspections undertaken as agreed in the Inspection & Test Plan in Condition XX-19(e) and by provision and approval of supporting documentation provided by the developers representative/s in support of the constructed works – EES PS4 and producer statements including supporting evidence of inspections by those persons, works acceptance certificate, statement of compliance of as built works and as built plans, RAMM data, management plans, operation and maintenance plans and all other test certificates and statements and supporting information required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Environmental Engineering Standards 2010.

No construction works are to commence onsite until the engineering plans required in condition 1-19(b) have been approved and all associated plan inspection fees have been paid.
- e The consent holder shall notify Council, in writing, of their intention to begin works, a minimum of seven days prior to commencing works. Such notification shall be sent to the Development Engineer and include the following details:*

- i. Name and telephone number of the project manager/ IQP.*
- ii. Site address to which the consent relates.*
- iii. Activities to which the consent relates.*
- iv. Expected duration of works.*

A copy of the approved engineering plans and a copy of the resource consent conditions, Inspection and Test Plan, approved corridor access request and the above letter are to be held onsite at all times during construction. All personnel working on the site shall be made aware of, and have access to the resource consent and accompanying documentation.

- f The consent holder shall submit written confirmation from power and telecommunications utility services operators that their conditions for this development have been satisfied in accordance with Council's Environmental Engineering Standards 2010 Edition to the approval of the Councils' Development Engineer or their delegated representative.*
- g The consent holder shall ensure that spoil from the site must not be tracked out onto Council or State Highway Road formations to the satisfaction of the Development Engineer or delegated representative.*
- h Dust nuisance must be controlled onsite (by use of a water cart or similar) by the applicant so as not to cause "offensive or objectionable" dust at or beyond the boundary of the development of the Development Engineer or delegated representative.*
- i The consent holder must provide written confirmation from a Licensed Cadastral Surveyor that all services and accesses are located within the appropriate easement boundaries to the satisfaction of the Development Engineer or delegated representative.*
- j The consent holder must reinstate Council's street footpath, stormwater kerb and channel, road carriageway formation, street berm and urban services by the demolition and construction works associated with the subdivision and land use activities shall be reinstated in accordance with Section 3 of Council's Environmental Engineering Standards 2010 Edition at the expense of the consent holder to the satisfaction of the Development Engineer or delegated representative.*
- k The consent holder must submit a certified and dated 'as built' plan of completed works and services in accordance with Council's Environmental Engineering Standards 2010 Edition. This condition shall be deemed satisfied once the as-builts have been approved by Councils' Development Engineer or delegated representative.*
- l The consent holder must submit certified RAMM data for all new/upgraded or extended vehicle crossing culverts prepared by a suitably qualified person in accordance with Council's Environmental Engineering Standards 2010 Edition to the satisfaction of the Development Engineer or delegated representative.*
- m The consent holder must supply and erect the Public street/road/access name for all Public Roads within the stage boundary in accordance with Sheet 24 of Council's Environmental Engineering Standards 2010 Edition, inclusive of the approved street/ road/access name. The sign shall be located in a position where it is most visible for road users to the satisfaction of the Development Engineer or delegated representative.*
- n The consent holder must submit for approval a completed Geotechnical report including a detailed site plan of any areas of filling, from a Geotechnical Engineer specifying any site restrictions, and confirmation that the land is suitable for building development to the satisfaction of the Development Engineer or delegated representative.*

- o *If filling were to occur on any allotment, the consent holder shall submit a Form EES PS4 compiled by a suitably qualified person including details confirming the location of such fill on the affected titles, to the satisfaction of the Development Engineer, or delegated representative. This Form EES PS4 (and associated reports, plans and similar) will be registered against the relevant titles via a consent notice.*
- p *Following completion of construction, the consent holder shall provide a works producer statement from the suitably qualified contractors who completed the works, certifying that the works have been completed in accordance with the approved engineering plans, Council's Environmental Engineering Standards 2010 Edition and best trade practise, to the satisfaction of Whangarei District Council's Development Engineer or delegated representative.*
- q *The consent holder shall complete all landscape works required by condition 16(i) of this consent to the satisfaction of the Team Leader RMA Approvals and Compliance or their delegated representative. Confirmation shall be provided by way of written evidence from a landscape architect and a site visit by a member of the Parks Department of the Council or their delegated representative.*
- r *The consent holder shall prepare a fencing covenant as defined under Section 2 of the Fencing Act 1978 to be registered against all residential allotments to be created adjoining Lot 553 as reserve to vest (excluding road reserve), specifying that Council will not be liable for any costs for future fencing of boundaries with any pond. In addition, the boundary fencing adjoining the pond to vest (excluding road reserve) above a height of 1.2m shall be constructed in visually permeable materials that allow visibility into the reserve. Details of proposed fencing shall be provided to Council's Parks and Recreation Manager for approval prior to construction.*
- s *Pursuant to Section 221 of the Resource Management Act 1991, a consent notice must be prepared and be registered on the Computer Freehold Register of (162-164, 167-168, 1710-1723, 175-183, 222-234, 237, 334-335, 338-339, 342-343, 346-347, 350-351, 354-355, 358-35960, & 446 & 450-451) at the consent holder's expense, containing the following conditions which are to be complied with on a continuing basis by the subdividing owner and subsequent owners:*
 - i *At the time of building consent provide suitable evidence/design to illustrate that, stormwater attenuation will be provided for all impervious surfaces exceeding 45% of the lot size area, to ensure compliance with Council's Environmental Engineering Standards 2010 and to the satisfaction of the Whangarei District Council. The design shall be undertaken by a suitably qualified engineer or Council IQP.*
 - ii *Any development shall comply with the restrictions and recommendations identified in the Geotechnical completion engineering report (with appropriate references and to be dated) as required under condition ~~XX-19~~(n) unless an alternative engineering report prepared by a Geotechnical or Chartered Professional Engineer is approved in writing by Council.*
 - iii *At the time of building consent, the property owner shall arrange to supply and install (at its own cost) a pressure sewer system of an approved make, brand or type (including all its constituent components) to the satisfaction of Council. After approval by WDC Waste and Drainage Manger, and connection of the pressure sewer system to the Council's reticulated system, WDC shall own and maintain the pressure sewer system in accordance with the WDC Pressure Sewer Policy. The Owner shall continue to own and maintain the property's gravity drain to the pump chamber. The Owner shall be responsible for paying for the power consumption of the pumping unit in accordance with Council Pressure Sewer Policy.*
 - iv *At the time of building consent, the owner shall construct the vehicle entrance crossing in accordance with Sheet 18 Residential Single Width Crossing also in accordance with Sheets 22 & 23 of Council's Environmental Engineering Standards 2010 Edition. Unless an existing approved vehicle crossing to the site exist. Entrance crossings are to be designed and constructed in such a*

manner that will control stormwater run-off entering a property from the road, and that likewise prevent stormwater and detritus, including gravel, dirt and other materials, migrating onto the road reserve from a property.

Decision

I have read the application, supporting documents, and the report and recommendations on the application for variation. I am satisfied that I have sufficient information to consider the matters required by the RMA and make a decision under delegated authority on the application.

Acting under delegated authority, under Sections 127, 104, 104B and Part 2 of the RMA, the application for variation to conditions of a resource consent is **GRANTED**.

Reasons

The reasons for this decision are:

1. The proposal is appropriately considered under s127 as the changes will not result in a fundamentally different activity or materially different effects.
2. In accordance with an assessment under s104(1)(a)-(ab) and s127(3) of the RMA, the actual and potential effects from the variation will be acceptable as:
 - a. The application has been assessed by Council's development engineers with review support by consulting engineering specialists and the proposed changes to conditions are considered acceptable. This has been relied upon to support the granting of this S127 application.
 - b. Overall, it is considered that there will be no adverse effects arising from the granting of consent that extend beyond those considered as part of the granting of the underlying subdivision consent.
 - c. With reference to s104(1)(ab), there are no specific offsetting or environmental compensation measures proposed or agreed to by the applicant to ensure positive effects on the environment .
3. In accordance with an assessment under s104(1)(b) and s127(3) of the RMA, the variation is consistent with the relevant statutory documents. In particular, the proposed changes to the conditions of consent to align with the revisions to the proposal, which will not result in any adverse effects on the surrounding environment.
4. In accordance with an assessment under s104(1)(c) and s127(3) of the RMA, no other matters are considered relevant.
5. In the context of this variation application, where the objectives and policies of the relevant statutory documents were prepared having regard to Part 2 of the RMA, they capture all relevant planning considerations and contain a coherent set of policies designed to achieve clear environmental outcomes. They also provide a clear framework for assessing all relevant potential effects and there is no need to go beyond

these provisions and look to Part 2 in making this decision as an assessment against Part 2 would not add anything to the evaluative exercise.

6. Overall, the proposal is considered acceptable to Council, and it is determined that there will be no additional adverse effects above what has already been approved as part of SD1800110 or SD1800110.01-.03.

Conditions

Under Sections 108 and 108AA of the RMA, I recommend that this variation is granted subject to the following additional conditions and amendments to existing conditions as set out in the Change of Conditions section in this Decision report as above.

Advice Notes

1. *A copy of the consolidated set of conditions of consent as amended is included as Attachment 1 to this Section 127 decision.*
2. *The consent holder is reminded that the decision on this Section 127 application does not affect the lapse period for the resource consent.*
3. *This decision is to be read in conjunction with any other relevant approved resource consent(s) and does not negate the consent holder's requirement to continue to comply with the conditions of any previously granted resource consent(s) that have been implemented.*

Decision prepared by:



Hamish Anderson

Consultant Senior Planner

Date: 5 February 2024

RMA Consents

Delegated decision maker:

Acting under delegated authority, and for the reasons set out in the above assessment and recommendation, under Sections 95A and 95C to 95D, and 95B and 95E to 95G of the RMA this application shall be processed non-notified.



Roger Quinton
Manager,
RMA Consents

Date: 9/2/2024

Attachment 1: Consolidated conditions of consent as amended

Implementation Condition Relating to All Stages

1. The subdivision shall be undertaken in general accordance with the plan of subdivision DWG No 31014-00-010-GE to 31014-00-016-GE Rev 1 dated 15/01/2018 prepared by WFH Properties Limited and including the following supporting documents, documents, except where superseded by the variations to approved consent SD1800110 including:

- The updated plans (Ref 14333-008 DWG Number SCH01, Rev E) prepared by Cook Costello Limited dated 31 January 2023 and the AEE prepared by Barker & Associates dated 14 March 2023.
- The updated Stormwater Report prepared by Cook Costello Limited dated 1 March 2023.
- The Civil Detail Design Plans titled “proposed civil detail design plans for WFH properties Ltd, The Landing, Stages 8A, 8B and 9, One Tree Point”; Job number 14333-008; Drawing numbers DD000-DD004, DD100-DD104, DD200-DD202, DD500-DD512, DD520-DD535, DD540 – DD553, DD560 – DD575, DD580 – DD598, DD600 – DD609, DD620 – DD624, DD630 – DD656, DD680 – DD691, Rev B, Dated 17 March 2023

Advice Note: As per the agreement via email of 16 January 2024 12:15PM from Alison.Thompson@wdc.govt.nz to Sammy@coco.co.nz and Phil@coco.co.nz, Cook Costello retains liability associated with the Stormwater model (MIKE+) and associated results that inform the Stormwater Report above, until such time that they have the model peer reviewed by an external reviewer expert in the use of MIKE+ software and all issues raised by the reviewer have been resolved to the satisfaction of the reviewer. The peer review is to be completed and all issues resolved by 31 March 2024.

Stage 8 A- 31 Residential Lots (Lots 187 – 207, 214-221, 444, and 445), Recreation Reserve Lot 602, Roads to Vest (roads 15 and 16), JOAL Lot 704.

18 Prior to issue of a Section 223 certificate

- a The consent holder must submit an Inspection & Test Plan (ITP) for approval prepared in accordance with Council’s Environmental Engineering Standards 2010 Edition and the WDC QA/QC Manual. The ITP is to be submitted to the Development Engineer or delegated representative for approval and be approved prior to the pre-start meeting and prior to any works being completed on the site. Note that this ITP will be processed in conjunction with the submitted engineering plans required by condition 18(a) and Council reserves the right to withhold ITP approval until the engineering plans are approved as these documents are to be read in conjunction with each other. (Refer to the advisory clause below for the web link to the WDC QA/QC Manual document).
- b The consent holder shall provide written confirmation from the telecommunications and power utility service operator of their consent conditions in accordance with Council’s Environmental Engineering Standards 2010 Edition and show necessary easements on the survey plan to the approval of the Councils’ Development Engineer or delegated representative.
- c The consent holder must create easements in gross over the proposed temporary turning head(s) to the satisfaction of the Development Engineer. The easements are to be sufficient to allow for the formal construction of the turning head and any associated underground services and footpaths should this become necessary. For clarity, this consent provides for the cancellation of easements (turning heads) when the future stage is lodged for Section 223 approval.

- d The consent holder must create easements over services and rights of way to the approval of the Development Engineer or delegated representative.
- e The consent holder must create easements over all proposed/existing Council services not located within 1.5m of the proposed property boundaries and/or as directed by the Development Engineer or delegated representative.
- f The consent holder must create easements in gross over all overland stormwater flow paths that fall into areas proposed for development (i.e. house site, effluent disposal site, accessway from road to house site etc.) and/or as directed by the Development Engineer. The easements are to cover the extent of the 1% Annual Exceedance Probability flows (+20% allowance for climate change) and are to the satisfaction of the Development Engineer or delegated representative.

Note: Overland flowpaths are to be assessed in accordance with Section 4.9 of Council's Environmental Engineering Standards 2010 Edition and are to be certified by an IQP/CPEng.

- g The consent holder must provide Council with three proposed street/road/access names in writing for all Roads to Vest within the stage boundaries in accordance with Council's policy, and in order of preference, giving reasons for each proposed name, for approval by Council. A clear plan detailing the route of the proposed street/road/access should also be submitted and any evidence of consultation relating to the proposed names. (Please refer to the road naming policy and guidelines available on Council's website www.wdc.govt.nz/).

Note: This condition will not be deemed to be satisfied unless Council has approved the submitted names in writing.

- h The consent holder must provide Council with three proposed street/road/access names in writing for all private roads serving 5 or more lots within the stage boundaries in accordance with Council's policy, and in order of preference, giving reasons for each proposed name, for approval by Council. A clear plan detailing the route of the proposed street/road/access should also be submitted and any evidence of consultation relating to the proposed names. (Please refer to the road naming policy and guidelines available on Council's website www.wdc.govt.nz/).

Note: This condition will not be deemed to be satisfied unless Council has approved the submitted names in writing.

- i The following conditions shall be shown on the survey plan and to be referenced LINZ 1507490:

"That Lot 704 hereon (Legal Access) be held as to ten undivided one-tenth shares by the owners of Lots 214, 215, 216, 217, 218, 220, 221, 444 and 445 hereon as tenants in common in the said shares and that individual Computer Registers be issued in accordance therewith".

- j A detailed Landscape Planting Plan prepared by a qualified landscape architect shall be submitted and approved by Council's Manager RMA Consents or delegated representative. The plan shall provide details of landscape materials and planting within and around the ponds, drainage reserve and road verges; and shall also include any proposed signage, walkways, boardwalks, street furniture and entry features within reserve areas or road reserves where applicable. The plan shall show as a minimum the following:
 - i. Names of proposed species.
 - ii. Size of proposed stock for planting.
 - iii. Numbers, locations, spacing and staking of proposed plants and trees taking into account the need to retain suitable sight lines for traffic.

- iv. Details of any structures including location, dimensions, materials and construction methods.
 - v. Details of any mulch or other stabilisation structures, including type, depth, and stabilisation methods; and shall include a weed management plan and a plant replacement program for maintenance of the asset until self sufficient or for three years following the issuance of a certificate under Section 224(c).
- k The consent holder shall vest Lot 602 for Recreation Reserve under the Reserves Act 1977 and provide a detail Reserve Development Plan (RDP) for the approval of Council's Manager – Parks and Recreation. The RDP shall be prepared and developed in accordance with the latest version of Council's Environmental Engineering Standards – Reserves and Urban Design which include, but not be limited, to the following:
- (i) Design Drawing and Specifications as public spaces;
 - (ii) Streetscape design;
 - (iii) Planting design (grassing, sowing and turfing, species selection, location of tree/plants size, irrigation, etc.);
 - (iv) Design of Landscape structures and furniture (play equipment, fencing etc.);
 - (v) Landscape works (earthworks, trees, soil testing, vehicle access barriers, fencing etc.);
 - (vi) Pedestrian Accessways;
 - (vii) Irrigation and fertilising;
 - (viii) Weed control; Pruning; Mulching; staking and protection; etc.;
 - (ix) Stormwater.
 - (x) Replacement planting; and
 - (xi) Construction and implementation programme.

19 Prior to issue of a Section 224 (c) certificate

- a The Consent Holder or its agent/contractor shall, at least 10 working days prior to the commencement of any land disturbance activities, prepare and submit a Construction Environmental Management Plan (CEMP) to the Council's Team Leader RMA Approvals and Compliance or delegated representative. Information required in this application is listed in the NRC consent granted on 28.2.2018 File :13780
- b The consent holder is to submit a Corridor Access Request application to Council's Road Corridor Co-ordinator and receive written approval for all works to be carried out within Council's Road Reserve in accordance with Council's Environmental Engineering Standards 2010 to the satisfaction of the Development Engineer or delegated representative (refer to the advisory clause below for the definition of a Corridor Access Request).
- c A pre-start meeting is required to be undertaken with the consent holders' representative (DR), contractor(s) and all other IQP's or agents for consent holder and the Development Engineer prior to any works being undertaken on the site to the satisfaction of the Development Engineer or delegated representative.
- d All work on the approved engineering plans in Condition 1 is to be carried out to the approval to the approval of the Development Engineer or delegated representative.

Compliance with this condition shall be determined by site inspections undertaken as agreed in the Inspection & Test Plan in Condition 18(a) and by provision and approval of supporting documentation provided by the developers representative/s in support of the constructed works – EES PS4 and producer statements including supporting evidence of inspections by those persons,

works acceptance certificate, statement of compliance of as built works and as built plans, RAMM data, management plans, operation and maintenance plans and all other test certificates and statements and supporting information required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Environmental Engineering Standards 2010.

No construction works are to commence onsite until all engineering plan inspection fees have been paid.

- e The consent holder shall notify Council, in writing, of their intention to begin works, a minimum of seven days prior to commencing works. Such notification shall be sent to the Development Engineer and include the following details:
 - i. Name and telephone number of the project manager/ IQP.
 - ii. Site address to which the consent relates.
 - iii. Activities to which the consent relates.
 - iv. Expected duration of works.

A copy of the approved engineering plans and a copy of the resource consent conditions, Inspection and Test Plan, approved corridor access request and the above letter are to be held onsite at all times during construction. All personnel working on the site shall be made aware of, and have access to the resource consent and accompanying documentation.

- f The consent holder shall submit written confirmation from power and telecommunications utility services operators that their conditions for this development have been satisfied in accordance with Council's Environmental Engineering Standards 2010 Edition to the approval of the Council's Development Engineer or their delegated representative.
- g The consent holder shall ensure that spoil from the site must not be tracked out onto Council or State Highway Road formations to the satisfaction of the Development Engineer or delegated representative.
- h Dust nuisance must be controlled onsite (by use of a water cart or similar) by the applicant so as not to cause "offensive or objectionable" dust at or beyond the boundary of the development of the Development Engineer or delegated representative.
- i The consent holder must provide written confirmation from a Licensed Cadastral Surveyor that all services and accesses are located within the appropriate easement boundaries to the satisfaction of the Development Engineer or delegated representative.
- j The consent holder must reinstate Council's street footpath, stormwater kerb and channel, road carriageway formation, street berm and urban services by the demolition and construction works associated with the subdivision and land use activities shall be reinstated in accordance with Section 3 of Council's Environmental Engineering Standards 2010 Edition at the expense of the consent holder to the satisfaction of the Development Engineer or delegated representative.
- k The consent holder must submit a certified and dated 'as built' plan of completed works and services in accordance with Council's Environmental Engineering Standards 2010 Edition. This condition shall be deemed satisfied once the as-builts have been approved by Council's Development Engineer or delegated representative.
- l The consent holder must submit certified RAMM data for all new/upgraded or extended vehicle crossing culverts prepared by a suitably qualified person in accordance with Council's Environmental Engineering Standards 2010 Edition to the satisfaction of the Development Engineer or delegated representative.

- m The consent holder must supply and erect the Public street/road/access name for all Public Roads within the stage boundary in accordance with Sheet 24 of Council's Environmental Engineering Standards 2010 Edition, inclusive of the approved street/ road/access name. The sign shall be located in a position where it is most visible for road users to the satisfaction of the Development Engineer or delegated representative.
- n The consent holder must supply and erect the Private street/road/access name for all private roads/ JOAL within the stage boundaries in accordance with Sheet 25 of Council's Environmental Engineering Standards 2010 Edition, inclusive of the approved street/ road/access name. The sign shall be located in a position where it is most visible for road users to the satisfaction of the Development Engineer or delegated representative.
- o The consent holder must submit for approval a completed Geotechnical report including a detailed site plan of any areas of filling, from a Geotechnical Engineer specifying any site restrictions, and confirmation that the land is suitable for building development to the satisfaction of the Development Engineer or delegated representative.
- p If filling were to occur on any allotment, the consent holder shall submit a Form EES PS4 compiled by a suitably qualified person including details confirming the location of such fill on the affected titles, to the satisfaction of the Development Engineer, or delegated representative. This Form EES PS4 (and associated reports, plans and similar) will be registered against the relevant titles via a consent notice.
- q Following completion of construction, the consent holder shall provide a works producer statement from the suitably qualified contractors who completed the works, certifying that the works have been completed in accordance with the approved engineering plans, Council's Environmental Engineering Standards 2010 Edition and best trade practise, to the satisfaction of Whangarei District Council's Development Engineer or delegated representative.
- r The consent holder shall complete all landscape works required by condition 18(j) of this consent to the satisfaction of the Team Leader RMA Approvals and Compliance or their delegated representative. Confirmation shall be provided by way of written evidence from a landscape architect and a site visit by a member of the Parks Department of the Council or their delegated representative.
- s The consent holder shall provide evidence from a suitably qualified professional that the Park and Recreational Development Plan approved under condition 18(k) has been implemented.
- t Pursuant to Section 221 of the Resource Management Act 1991, a consent notice must be prepared and be registered on the Computer Freehold Register of 187-207, 214-221, 444 and 445 at the consent holder's expense, containing the following conditions which are to be complied with on a continuing basis by the subdividing owner and subsequent owners:
 - i At the time of building consent provide suitable evidence/design to illustrate that, stormwater attenuation will be provided for all impervious surfaces exceeding 45% of the lot size area, to ensure compliance with Council's Environmental Engineering Standards 2010 and to the satisfaction of the Whangarei District Council. The design shall be undertaken by a suitably qualified engineer or Council IQP.
 - ii Any development shall comply with the restrictions and recommendations identified in the Geotechnical completion engineering report (with appropriate references and to be dated) as required under condition 21(o) unless an alternative engineering report prepared by a Geotechnical or Chartered Professional Engineer is approved in writing by Council.

- iii At the time of building consent, the property owner shall arrange to supply and install (at its own cost) a pressure sewer system of an approved make, brand or type (including all its constituent components) to the satisfaction of Council. After approval by WDC Waste and Drainage Manger, and connection of the pressure sewer system to the Council's reticulated system, WDC shall own and maintain the pressure sewer system in accordance with the WDC Pressure Sewer Policy. The Owner shall continue to own and maintain the property's gravity drain to the pump chamber. The Owner shall be responsible for paying for the power consumption of the pumping unit in accordance with Council Pressure Sewer Policy.

- iv At the time of building consent, the owner shall construct the vehicle entrance crossing in accordance with Sheet 18 Residential Single Width Crossing also in accordance with Sheets 22 & 23 of Council's Environmental Engineering Standards 2010 Edition. Unless an existing approved vehicle crossing to the site exist. Entrance crossings are to be designed and constructed in such a manner that will control stormwater run-off entering a property from the road, and that likewise prevent stormwater and detritus, including gravel, dirt and other materials, migrating onto the road reserve from a property.

Stage 8B - 42 Residential Lots (Lots 121-129, 139-147, 153-183), Roads to Vest (roads 10, 12, 14 and 17) and recreation reserve Lot 553 (stormwater pond).

20 Prior to issue of a Section 223 certificate

- a The consent holder must submit an Inspection & Test Plan (ITP) for approval prepared in accordance with Council's Environmental Engineering Standards 2010 Edition and the WDC QA/QC Manual. The ITP is to be submitted to the Development Engineer or delegated representative for approval and be approved prior to the pre-start meeting and prior to any works being completed on the site. Note that this ITP will be processed in conjunction with the submitted engineering plans required by condition 20(a) and Council reserves the right to withhold ITP approval until the engineering plans are approved as these documents are to be read in conjunction with each other. (Refer to the advisory clause below for the web link to the WDC QA/QC Manual document).

- b The consent holder shall provide written confirmation from the telecommunications and power utility service operator of their consent conditions in accordance with Council's Environmental Engineering Standards 2010 Edition and show necessary easements on the survey plan to the approval of the Councils' Development Engineer or delegated representative.

- c The consent holder must create easements in gross over the proposed temporary turning head(s) to the satisfaction of the Development Engineer. The easements are to be sufficient to allow for the formal construction of the turning head and any associated underground services and footpaths should this become necessary. For clarity, this consent provides for the cancellation of easements (turning heads) when the future stage is lodged for Section 223 approval.

- d The consent holder must create easements over services and rights of way to the approval of the Development Engineer or delegated representative.

- e The consent holder must create easements over all proposed/existing Council services not located within 1.5m of the proposed property boundaries and/or as directed by the Development Engineer or delegated representative.

- f The consent holder must create easements in gross over all overland stormwater flow paths that fall into areas proposed for development (i.e. house site, effluent disposal site, accessway from road to house site etc.) and/or as directed by the Development Engineer. The easements are to cover the extent of the 1% Annual Exceedance Probability flows (+20% allowance for climate change) and are to the satisfaction of the Development Engineer or delegated representative.

Note: Overland flowpaths are to be assessed in accordance with Section 4.9 of Council's Environmental Engineering Standards 2010 Edition and are to be certified by an IQP/CPEng.

- g The consent holder must provide Council with three proposed street/road/access names in writing for all Roads to Vest within the stage boundaries in accordance with Council's policy, and in order of preference, giving reasons for each proposed name, for approval by Council. A clear plan detailing the route of the proposed street/road/access should also be submitted and any evidence of consultation relating to the proposed names. (Please refer to the road naming policy and guidelines available on Council's website www.wdc.govt.nz/).

Note: This condition will not be deemed to be satisfied unless Council has approved the submitted names in writing.

- h The consent holder must provide Council with three proposed street/road/access names in writing for all private roads serving 5 or more lots within the stage boundaries in accordance with Council's policy, and in order of preference, giving reasons for each proposed name, for approval by Council. A clear plan detailing the route of the proposed street/road/access should also be submitted and any evidence of consultation relating to the proposed names. (Please refer to the road naming policy and guidelines available on Council's website www.wdc.govt.nz/).

Note: This condition will not be deemed to be satisfied unless Council has approved the submitted names in writing.

- i A detailed Landscape Planting Plan prepared by a qualified landscape architect shall be submitted and approved by Council's Manager RMA Consents or delegated representative. The plan shall provide details of landscape materials and planting within and around the ponds, drainage reserve and road verges; and shall also include any proposed signage, walkways, boardwalks, street furniture and entry features within reserve areas or road reserves where applicable. The plan shall show as a minimum the following;
- i. Names of proposed species.
 - ii. Size of proposed stock for planting.
 - iii. Numbers, locations, spacing and staking of proposed plants and trees taking into account the need to retain suitable sight lines for traffic.
 - iv. Details of any structures including location, dimensions, materials and construction methods.
 - v. Details of any mulch or other stabilisation structures, including type, depth, and stabilisation methods; and shall include a weed management plan and a plant replacement program for maintenance of the asset until self sufficient or for three years following the issuance of a certificate under Section 224(c).

21 Prior to issue of a Section 224 (c) certificate

- a At least 10 working days prior to the commencement of construction works onsite, the Consent Holder shall provide a Construction Management Plan (CMP) to Councils Manager RMA consents for certification. The objective of the CMP is to outline the approach to be taken for the managing of construction works within Pyle Road East and in proximity to the Road 10 intersection to ensure that impacts that may arise from the works have been appropriately identified, managed and minimised.

The CMP shall include but not limited to:

- Details of the works, intended construction timetable (including staging) and hours of operation;

- Contact details of the person in charge of construction works or other person responsible for implementing this Plan;
 - Methods to control dust, debris on roads and silt laden runoff during construction;
 - Erosion and sediment control measures to avoid adverse offsite effects arising from the earthworks construction works;
 - Details of any existing network utilities on the site and how they will be protected and accessed during construction activities;
 - A Traffic Management Plan, including but not limited to:
 - Routes to be used by construction traffic to access and egress the site and to minimise movements onto the public road network.
 - Site access and management, including proposed methods to restrict and/or limit access from public onto Pyle Road East until such time that the road upgrades required as part of Stage 9 of the subdivision are completed.
 - Access points for construction vehicles onto and off the road network from the site and Pyle Road East, and measures to be adopted at these access points to ensure a safe traffic environment for other road users, including pedestrians and cyclists.
 - On-site parking for contractor vehicles thereby ensuring on-street parking is avoided.
 - Quality assurance/quality control;
 - General methods to mitigate and manage construction noise and vibration in order to comply with the applicable noise limits;
 - Adjacent land owner and occupier liaison during the construction stage;
 - Details as to how and when the property owners along Pyle Road East will be consulted with relating to construction works within the road corridor and associated access restrictions.
 - Complaints handling procedure; and
 - Any necessary health and safety requirements.
- b The consent holder shall implement the certified CMP (condition 20(a)) until the completion of the construction works associated with stages 8b and 9.
- c Any changes to the CMP shall be made in accordance with the methodology and certified procedures in that plan shall be confirmed in writing by the Consent Holder following consultation with the Manager RMA consents (or nominee) before implementation. The Construction Management Plan shall be updated as required to cover each development stage and progress of construction onsite.
- d The consent holder is to submit a Corridor Access Request application to Council's Road Corridor Co-ordinator and receive written approval for all works to be carried out within Council's Road Reserve in accordance with Council's Environmental Engineering Standards 2010 to the satisfaction of the Development Engineer or delegated representative (refer to the advisory clause below for the definition of a Corridor Access Request).
- e A pre-start meeting is required to be undertaken with the consent holders' representative (DR), contractor(s) and all other IQP's or agents for consent holder and the Development Engineer prior to any works being undertaken on the site to the satisfaction of the Development Engineer or delegated representative.
- f All work on the approved engineering plans in Condition 1 is to be carried out to the approval to the approval of the Development Engineer or delegated representative.

Compliance with this condition shall be determined by site inspections undertaken as agreed in the Inspection & Test Plan in Condition 20(a) and by provision and approval of supporting documentation provided by the developers representative/s in support of the constructed works – EES PS4 and producer statements including supporting evidence of inspections by those persons, works acceptance certificate, statement of compliance of as built works and as built plans, RAMM data, management plans, operation and maintenance plans and all other test certificates and statements and supporting information required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Environmental Engineering Standards 2010.

No construction works are to commence onsite until the engineering plans required in condition 20(a) have been approved and all associated plan inspection fees have been paid.

- g The consent holder shall notify Council, in writing, of their intention to begin works, a minimum of seven days prior to commencing works. Such notification shall be sent to the Development Engineer and include the following details:
- i. Name and telephone number of the project manager/ IQP.
 - ii. Site address to which the consent relates.
 - iii. Activities to which the consent relates.
 - iv. Expected duration of works.

A copy of the approved engineering plans and a copy of the resource consent conditions, Inspection and Test Plan, approved corridor access request and the above letter are to be held onsite at all times during construction. All personnel working on the site shall be made aware of, and have access to the resource consent and accompanying documentation.

- h The consent holder shall submit written confirmation from power and telecommunications utility services operators that their conditions for this development have been satisfied in accordance with Council's Environmental Engineering Standards 2010 Edition to the approval of the Council's Development Engineer or their delegated representative.
- i The consent holder shall ensure that spoil from the site must not be tracked out onto Council or State Highway Road formations to the satisfaction of the Development Engineer or delegated representative.
- j Dust nuisance must be controlled onsite (by use of a water cart or similar) by the applicant so as not to cause "offensive or objectionable" dust at or beyond the boundary of the development of the Development Engineer or delegated representative.
- k The consent holder must provide written confirmation from a Licensed Cadastral Surveyor that all services and accesses are located within the appropriate easement boundaries to the satisfaction of the Development Engineer or delegated representative.
- l The consent holder must reinstate Council's street footpath, stormwater kerb and channel, road carriageway formation, street berm and urban services by the demolition and construction works associated with the subdivision and land use activities shall be reinstated in accordance with Section 3 of Council's Environmental Engineering Standards 2010 Edition at the expense of the consent holder to the satisfaction of the Development Engineer or delegated representative.
- m The consent holder must submit a certified and dated 'as built' plan of completed works and services in accordance with Council's Environmental Engineering Standards 2010 Edition. This condition shall be deemed satisfied once the as-builts have been approved by Councils' Development Engineer or delegated representative.

- n The consent holder must submit certified RAMM data for all new/upgraded or extended vehicle crossing culverts prepared by a suitably qualified person in accordance with Council's Environmental Engineering Standards 2010 Edition to the satisfaction of the Development Engineer or delegated representative.
- o The consent holder must supply and erect the Public street/road/access name for all Public Roads within the stage boundary in accordance with Sheet 24 of Council's Environmental Engineering Standards 2010 Edition, inclusive of the approved street/ road/access name. The sign shall be located in a position where it is most visible for road users to the satisfaction of the Development Engineer or delegated representative.
- p The consent holder must submit for approval a completed Geotechnical report including a detailed site plan of any areas of filling, from a Geotechnical Engineer specifying any site restrictions, and confirmation that the land is suitable for building development to the satisfaction of the Development Engineer or delegated representative.
- q If filling were to occur on any allotment, the consent holder shall submit a Form EES PS4 compiled by a suitably qualified person including details confirming the location of such fill on the affected titles, to the satisfaction of the Development Engineer, or delegated representative. This Form EES PS4 (and associated reports, plans and similar) will be registered against the relevant titles via a consent notice.
- r Following completion of construction, the consent holder shall provide a works producer statement from the suitably qualified contractors who completed the works, certifying that the works have been completed in accordance with the approved engineering plans, Council's Environmental Engineering Standards 2010 Edition and best trade practise, to the satisfaction of Whangarei District Council's Development Engineer or delegated representative.
- s The consent holder shall complete all landscape works required by condition 20(j) of this consent to the satisfaction of the Team Leader RMA Approvals and Compliance or their delegated representative. Confirmation shall be provided by way of written evidence from a landscape architect and a site visit by a member of the Parks Department of the Council or their delegated representative.
- t The consent holder shall provide evidence from a suitably qualified professional that the Park and Recreational Development Plan approved under condition 16(l) has been implemented.
- u Pursuant to Section 221 of the Resource Management Act 1991, a consent notice must be prepared and be registered on the Computer Freehold Register of 121-129, 139-147 and 153 -183 at the consent holder's expense, containing the following conditions which are to be complied with on a continuing basis by the subdividing owner and subsequent owners:
 - i At the time of building consent provide suitable evidence/design to illustrate that, stormwater attenuation will be provided for all impervious surfaces exceeding 45% of the lot size area, to ensure compliance with Council's Environmental Engineering Standards 2010 and to the satisfaction of the Whangarei District Council. The design shall be undertaken by a suitably qualified engineer or Council IQP.
 - ii Any development shall comply with the restrictions and recommendations identified in the Geotechnical completion engineering report (with appropriate references and to be dated) as required under condition 20(o) unless an alternative engineering report prepared by a Geotechnical or Chartered Professional Engineer is approved in writing by Council.
 - iii At the time of building consent, the property owner shall arrange to supply and install (at its own cost) a pressure sewer system of an approved make, brand or type (including all its constituent components) to the satisfaction of Council. After approval by WDC Waste and Drainage Manger, and connection of the pressure sewer system to the Council's reticulated system, WDC shall own and maintain the pressure sewer system in accordance with the WDC Pressure Sewer Policy. The Owner shall continue to own and maintain the property's gravity drain to the pump chamber. The Owner shall be responsible for paying for the power consumption of the pumping unit in accordance with Council Pressure Sewer Policy.

- iv At the time of building consent, the owner shall construct the vehicle entrance crossing in accordance with Sheet 18 Residential Single Width Crossing also in accordance with Sheets 22 & 23 of Council's Environmental Engineering Standards 2010 Edition. Unless an existing approved vehicle crossing to the site exist. Entrance crossings are to be designed and constructed in such a manner that will control stormwater run-off entering a property from the road, and that likewise prevent stormwater and detritus, including gravel, dirt and other materials, migrating onto the road reserve from a property.
- v The consent holder shall prepare a fencing covenant as defined under Section 2 of the Fencing Act 1978 to be registered against all residential allotments to be created adjoining the stormwater Lot 553 as reserve to vest (excluding road reserve), specifying that Council will not be liable for any costs for future fencing of boundaries with any pond. In addition, the boundary fencing adjoining the pond to vest (excluding road reserve) above a height of 1.2m shall be constructed in visually permeable materials that allow visibility into the reserve. Details of proposed fencing shall be provided to Council's Parks and Recreation Manager for approval prior to construction.

Stage 9 - 38 residential lots (Lots 162-164, 167-168, 171-172, 222-234, 237, 334-335, 338-339, 346-347, 350-351, 354-355, 358-359, & 446 & 450-451), Roads to Vest (road 17)

21 Prior to issue of a Section 223 certificate

- a –
- b The consent holder must submit an Inspection & Test Plan (ITP) for approval prepared in accordance with Council's Environmental Engineering Standards 2010 Edition and the WDC QA/QC Manual. The ITP is to be submitted to the Development Engineer for approval and be approved prior to the pre-start meeting and prior to any works being completed on the site. Note that this ITP will be processed in conjunction with the submitted engineering plans required by condition 18(a) and Council reserves the right to withhold ITP approval until the engineering plans are approved as these documents are to be read in conjunction with each other. (Refer to the advisory clause below for the web link to the WDC QA/QC Manual document).
- c The consent holder shall provide written confirmation from the telecommunications and power utility service operator of their consent conditions in accordance with Council's Environmental Engineering Standards 2010 Edition and show necessary easements on the survey plan to the approval of the Councils' Development Engineer or delegated representative.
- d The consent holder must create easements over services and rights of way to the approval of the Development Engineer or delegated representative.
- e The consent holder must create easements over all proposed/existing Council services not located within 1.5m of the proposed property boundaries and/or as directed by the Development Engineer or delegated representative.
- f The consent holder must create easements in gross over all overland stormwater flow paths that fall into areas proposed for development (i.e. house site, effluent disposal site, accessway from road to house site etc.) and/or as directed by the Development Engineer or delegated representative. The easements are to cover the extent of the 1% Annual Exceedance Probability flows (+20% allowance for climate change) and are to the satisfaction of the Development Engineer or delegated representative.

Note: Overland flowpaths are to be assessed in accordance with Section 4.9 of Council's Environmental Engineering Standards 2010 Edition and are to be certified by an IQP/CPEng.

- g The consent holder must provide Council with three proposed street/road/access names in writing for all Roads to Vest within the stage boundaries in accordance with Council's policy, and in order of preference, giving reasons for each proposed name, for approval by Council. A clear plan detailing the route of the

proposed street/road/access should also be submitted and any evidence of consultation relating to the proposed names. (Please refer to the road naming policy and guidelines available on Council's website www.wdc.govt.nz/).

Note - This condition will not be deemed to be satisfied unless Council has approved the submitted names in writing.

- h A detailed Landscape Planting Plan prepared by a qualified landscape architect shall be submitted and approved by Council's Manager RMA Consents or delegated representative. The plan shall provide details of landscape materials and planting within and around the ponds, drainage reserve and road verges; and shall also include any proposed signage, walkways, boardwalks, street furniture and entry features within reserve areas or road reserves where applicable. The plan shall show as a minimum the following:
- i. Names of proposed species.
 - ii. Size of proposed stock for planting.
 - iii. Numbers, locations, spacing and staking of proposed plants and trees taking into account the need to retain suitable sight lines for traffic.
 - iv. Details of any structures including location, dimensions, materials and construction methods.
 - v. Details of any mulch or other stabilisation structures, including type, depth, and stabilisation methods; and shall include a weed management plan and a plant replacement program for maintenance of the asset until self sufficient or for three years following the issuance of a certificate under Section 224(c).

22-Prior to issue of a Section 224 (c) certificate:

- a The Consent Holder or its agent/contractor shall, at least 10 working days prior to the commencement of any land disturbance activities, prepare and submit a Construction Environmental Management Plan (CEMP) to the Council's Team Leader RMA Approvals and Compliance or delegated representative. Information required in this application is listed in the NRC consent granted on 28.2.2018 File :13780
- b The consent holder is to submit a Corridor Access Request application to Council's Road Corridor Co-ordinator and receive written approval for all works to be carried out within Council's Road Reserve in accordance with Council's Environmental Engineering Standards 2010 to the satisfaction of the Development Engineer or delegated representative (refer to the advisory clause below for the definition of a Corridor Access Request).
- c A pre-start meeting is required to be undertaken with the consent holders' representative (DR), contractor(s) and all other IQP's or agents for consent holder and the Development Engineer prior to any works being undertaken on the site to the satisfaction of the Development Engineer or delegated representative.
- d All work on the approved engineering plans in Condition 1 is to be carried out to the approval to the approval of the Development Engineer or delegated representative.

Compliance with this condition shall be determined by site inspections undertaken as agreed in the Inspection & Test Plan in Condition 21b and by provision and approval of supporting documentation provided by the developers representative/s in support of the constructed works – EES PS4 and producer statements including supporting evidence of inspections by those persons, works acceptance certificate, statement of compliance of as built works and as built plans, RAMM data, management plans, operation and maintenance plans and all other test certificates and statements and supporting information required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Environmental Engineering Standards 2010.

No construction works are to commence onsite until the engineering plans required in condition 1 have been approved and all associated plan inspection fees have been paid.

- e The consent holder shall notify Council, in writing, of their intention to begin works, a minimum of seven days prior to commencing works. Such notification shall be sent to the Development Engineer and include the following details:
- i. Name and telephone number of the project manager/ IQP.
 - ii. Site address to which the consent relates.
 - iii. Activities to which the consent relates.
 - iv. Expected duration of works.

A copy of the approved engineering plans and a copy of the resource consent conditions, Inspection and Test Plan, approved corridor access request and the above letter are to be held onsite at all times during construction. All personnel working on the site shall be made aware of, and have access to the resource consent and accompanying documentation.

- f The consent holder shall submit written confirmation from power and telecommunications utility services operators that their conditions for this development have been satisfied in accordance with Council's Environmental Engineering Standards 2010 Edition to the approval of the Council's Development Engineer or their delegated representative.
- g The consent holder shall ensure that spoil from the site must not be tracked out onto Council or State Highway Road formations to the satisfaction of the Development Engineer or delegated representative.
- h Dust nuisance must be controlled onsite (by use of a water cart or similar) by the applicant so as not to cause "offensive or objectionable" dust at or beyond the boundary of the development of the Development Engineer or delegated representative.
- i The consent holder must provide written confirmation from a Licensed Cadastral Surveyor that all services and accesses are located within the appropriate easement boundaries to the satisfaction of the Development Engineer or delegated representative.
- j The consent holder must reinstate Council's street footpath, stormwater kerb and channel, road carriageway formation, street berm and urban services by the demolition and construction works associated with the subdivision and land use activities shall be reinstated in accordance with Section 3 of Council's Environmental Engineering Standards 2010 Edition at the expense of the consent holder to the satisfaction of the Development Engineer or delegated representative.
- k The consent holder must submit a certified and dated 'as built' plan of completed works and services in accordance with Council's Environmental Engineering Standards 2010 Edition. This condition shall be deemed satisfied once the as-builts have been approved by Council's Development Engineer or delegated representative.
- l The consent holder must submit certified RAMM data for all new/upgraded or extended vehicle crossing culverts prepared by a suitably qualified person in accordance with Council's Environmental Engineering Standards 2010 Edition to the satisfaction of the Development Engineer or delegated representative.
- m The consent holder must supply and erect the Public street/road/access name for all Public Roads within the stage boundary in accordance with Sheet 24 of Council's Environmental Engineering Standards 2010 Edition, inclusive of the approved street/ road/access name. The sign shall be located in a position where it is most visible for road users to the satisfaction of the Development Engineer or delegated representative.
- n The consent holder must submit for approval a completed Geotechnical report including a detailed site plan of any areas of filling, from a Geotechnical Engineer specifying any site restrictions, and confirmation that the land is suitable for building development to the satisfaction of the Development Engineer or delegated representative.

- o If filling were to occur on any allotment, the consent holder shall submit a Form EES PS4 compiled by a suitably qualified person including details confirming the location of such fill on the affected titles, to the satisfaction of the Development Engineer, or delegated representative. This Form EES PS4 (and associated reports, plans and similar) will be registered against the relevant titles via a consent notice.
- p Following completion of construction, the consent holder shall provide a works producer statement from the suitably qualified contractors who completed the works, certifying that the works have been completed in accordance with the approved engineering plans, Council's Environmental Engineering Standards 2010 Edition and best trade practise, to the satisfaction of Whangarei District Council's Development Engineer or delegated representative.
- q The consent holder shall complete all landscape works required by condition 16(i) of this consent to the satisfaction of the Team Leader RMA Approvals and Compliance or their delegated representative. Confirmation shall be provided by way of written evidence from a landscape architect and a site visit by a member of the Parks Department of the Council or their delegated representative.
- r The consent holder shall prepare a fencing covenant as defined under Section 2 of the Fencing Act 1978 to be registered against all residential allotments to be created adjoining Lot 553 as reserve to vest (excluding road reserve), specifying that Council will not be liable for any costs for future fencing of boundaries with any pond. In addition, the boundary fencing adjoining the pond to vest (excluding road reserve) above a height of 1.2m shall be constructed in visually permeable materials that allow visibility into the reserve. Details of proposed fencing shall be provided to Council's Parks and Recreation Manager for approval prior to construction.
- s Pursuant to Section 221 of the Resource Management Act 1991, a consent notice must be prepared and be registered on the Computer Freehold Register of (162-164, 167-168, 171-172, 222-234, 237, 334-335, 338-339, 342-343, 346-347, 350-351, 354-355, 358-359, & 446 & 450-451) at the consent holder's expense, containing the following conditions which are to be complied with on a continuing basis by the subdividing owner and subsequent owners:
 - i At the time of building consent provide suitable evidence/design to illustrate that, stormwater attenuation will be provided for all impervious surfaces exceeding 45% of the lot size area, to ensure compliance with Council's Environmental Engineering Standards 2010 and to the satisfaction of the Whangarei District Council. The design shall be undertaken by a suitably qualified engineer or Council IQP.
 - ii Any development shall comply with the restrictions and recommendations identified in the Geotechnical completion engineering report (with appropriate references and to be dated) as required under condition 21(0) unless an alternative engineering report prepared by a Geotechnical or Chartered Professional Engineer is approved in writing by Council.
 - iii At the time of building consent, the property owner shall arrange to supply and install (at its own cost) a pressure sewer system of an approved make, brand or type (including all its constituent components) to the satisfaction of Council. After approval by WDC Waste and Drainage Manger, and connection of the pressure sewer system to the Council's reticulated system, WDC shall own and maintain the pressure sewer system in accordance with the WDC Pressure Sewer Policy. The Owner shall continue to own and maintain the property's gravity drain to the pump chamber. The Owner shall be responsible for paying for the power consumption of the pumping unit in accordance with Council Pressure Sewer Policy.
 - iv At the time of building consent, the owner shall construct the vehicle entrance crossing in accordance with Sheet 18 Residential Single Width Crossing also in accordance with Sheets 22 & 23 of Council's Environmental Engineering Standards 2010 Edition. Unless an existing approved vehicle crossing to the site exist. Entrance crossings are to be designed and constructed in such a manner that will control

stormwater run-off entering a property from the road, and that likewise prevent stormwater and detritus, including gravel, dirt and other materials, migrating onto the road reserve from a property.

FOR APPROVAL
SIGNED _____ DATE 17/03/2023



cook | costello

PROPOSED CIVIL DETAIL DESIGN PLANS

SD1800110.04

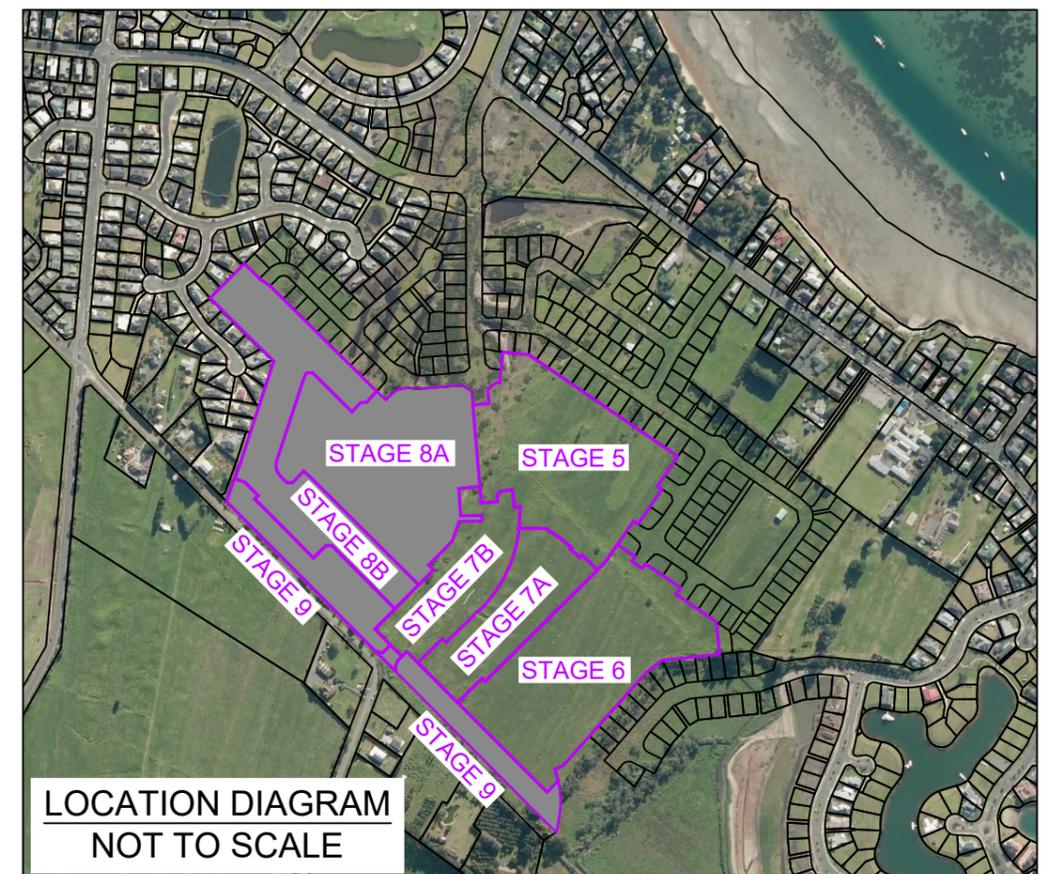
APPROVED

Hamish Anderson
09/02/2024

FOR WFH PROPERTIES LTD,
THE LANDING, STAGES 8A, 8B & 9,
ONE TREE POINT

WDC REF: SD1800110

JOB NO:14333-008
DATE: 17 MARCH 2023



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

DWG NUMBER	REV.
DD000	B

SCHEDULE OF DRAWINGS

SHEET #	TITLE	REV
DD000 - GENERAL		
DD000	COVER SHEET	B
DD001	DRAWING INDEX - SHEET 1	B
DD002	DRAWING INDEX - SHEET 2	B
DD003	CONSTRUCTION NOTES	B
DD004	LEGEND	B
DD100 - EXISTING SERVICES		
DD100	EXISTING SERVICES - OVERVIEW PLAN	B
DD101	EXISTING SERVICES - SHEET 1	B
DD102	EXISTING SERVICES - SHEET 2	B
DD103	EXISTING SERVICES - SHEET 3	B
DD104	EXISTING SERVICES - SHEET 4	B
DD200 - PROPOSED LAYOUT		
DD200	PROPOSED LAYOUT - SUBDIVISION STAGING PLAN	B
DD201	PROPOSED LAYOUT - STAGES 8A & 8B	B
DD202	PROPOSED LAYOUT - STAGE 9	B
EROSION SEDIMENT CONTROL PLANS		
SEE STAGES 8 & 9 EARTHWORKS PLANS		
BULK EARTHWORKS		
SEE STAGES 8 & 9 EARTHWORKS PLANS		
AB500 - ROADING		
DD500	ROADING LAYOUT - OVERVIEW	B
DD501	ROADING LAYOUT - SHEET 1	B
DD502	ROADING LAYOUT - SHEET 2	B
DD503	ROADING LAYOUT - SHEET 3	B
DD504	ROADING LAYOUT - SHEET 4	B
DD505	ROADING LAYOUT - SHEET 5	B
DD506	ROADING LAYOUT - SHEET 6	B
DD507	ROADING LAYOUT - SHEET 7	B
DD508	ROADING LAYOUT - SHEET 8	B
DD509	ROADING LAYOUT - SHEET 9	B
DD510	ROADING LAYOUT - SHEET 10	B
DD511	ROADING LAYOUT - SHEET 11	B
DD512	ROADING LAYOUT - SHEET 12	B
DD520	ROADING TYPICAL SECTIONS - SHEET 1	B
DD521	ROADING TYPICAL SECTIONS - SHEET 2	B
DD522	ROADING TYPICAL SECTIONS - SHEET 3	B
DD523	ROADING TYPICAL SECTIONS - SHEET 4	B
DD524	ROADING TYPICAL SECTIONS - SHEET 5	B
DD525	COMBINED SERVICE TRENCH DETAILS	B
DD526	TYPICAL PAVEMENT DETAILS	B
DD527	TYPICAL ROUNDABOUT & SPEED HUMP DETAILS	B
DD528	TYPICAL SPEED TABLES	B
DD530	ROAD LONGSECTIONS - ROAD 10	B
DD531	ROAD LONGSECTIONS - ROAD 12	B
DD532	ROAD LONGSECTIONS - ROADS 14 & 15	B
DD533	ROAD LONGSECTIONS - ROADS 16 & 17	B
DD534	ROAD LONGSECTIONS - PYLE ROAD EAST & PAPER ROAD	B

DD535	ROAD LONGSECTIONS - PAPER ROAD & JOAL 704	B
DD540	ROAD CROSS SECTIONS - ROAD 12 SHEET 1	B
DD541	ROAD CROSS SECTIONS - ROAD 12 SHEET 2	B
DD542	ROAD CROSS SECTIONS - ROAD 12 SHEET 3	B
DD543	ROAD CROSS SECTIONS - ROAD 14 SHEET 1	B
DD544	ROAD CROSS SECTIONS - ROAD 14 SHEET 2	B
DD545	ROAD CROSS SECTIONS - ROAD 15 SHEET 1	B
DD546	ROAD CROSS SECTIONS - ROAD 15 SHEET 2	B
DD547	ROAD CROSS SECTIONS - ROAD 16 SHEET 1	B
DD548	ROAD CROSS SECTIONS - ROAD 16 SHEET 2	B
DD549	ROAD CROSS SECTIONS - ROAD 17	B
DD550	ROAD CROSS SECTIONS - PYLE ROAD EAST SHEET 1	B
DD551	ROAD CROSS SECTIONS - PYLE ROAD EAST SHEET 2	B
DD552	ROAD CROSS SECTIONS - PAPER ROAD SHEET 1	B
DD553	ROAD CROSS SECTIONS - PAPER ROAD SHEET 2	B
DD560	KERB RETURNS - ROUNDABOUT 16	B
DD561	KERB RETURNS - ROUNDABOUT 16	B
DD562	KERB RETURNS - ROUNDABOUT 16	B
DD563	KERB RETURNS - INTERSECTION OF ROADS 12 AND 14	B
DD564	KERB RETURNS - INTERSECTION OF ROADS 14 AND 16	B
DD565	KERB RETURNS - INTERSECTION OF ROADS 12 AND 16	B
DD566	KERB RETURNS - INTERSECTION OF ROADS 15 AND 16	B
DD567	KERB RETURNS - INTERSECTION OF ROADS 12 AND 17	B
DD568	KERB RETURNS - INTERSECTION OF PYLE ROAD EAST AND ROAD 17	B
DD569	KERB RETURNS - CUL-DE-SAC PAPER ROAD	B
DD570	LINEMARKING & SIGNPOSTING PLAN - ROUNDABOUT 16	B
DD571	LINEMARKING & SIGNPOSTING PLAN - INTER RDS 12 & 14 AND 14 & 16	B
DD572	LINEMARKING & SIGNPOSTING PLAN - INTER RDS 12 & 16 AND 15 & 16	B
DD573	LINEMARKING & SIGNPOSTING PLAN - INTERSECTION RDS 12 & 17 AND RD 17 & PYLE RD EAST	B
DD574	LINEMARKING & SIGNPOSTING PLAN - CUL-DE-SAC AND SPEED HUMPS ON ROAD 12	B
DD575	LINEMARKING & SIGNPOSTING PLAN - SPEED HUMPS ROAD 15	B
DD580	VEHICLE CROSSING - JOAL 704 AND LOTS 122, 123 & 124	B
DD581	VEHICLE CROSSING - LOTS 359, 450 & 451	B
DD582	VEHICLE CROSSING - SEC 1 SO 44828 & LOT 1 DP 502659	B
DD583	VEHICLE CROSSING DETAILS	B
DD584	VEHICLE TRACKING CURVES - ROUNDABOUT 16	B
DD585	VEHICLE TRACKING CURVES - ROUNDABOUT 16	B
DD586	VEHICLE TRACKING CURVES - ROUNDABOUT 16 & INTERSECTION OF ROAD 17 & PYLE ROAD EAST	B
DD587	VEHICLE TRACKING CURVES - INTERSECTION OF ROADS 12 & 17 AND ROADS 12 & 16	B
DD588	VEHICLE TRACKING CURVES - INTERSECTION OF ROADS 15 & 16 AND ROADS 14 & 16	B
DD589	VEHICLE TRACKING CURVES - INTERSECTION OF ROADS 12 & 14	B
DD590	VEHICLE SIGHT LINES - ROUNDABOUT 16	B
DD591	VEHICLE SIGHT LINES - ROUNDABOUT 16	B
DD592	VEHICLE SIGHT LINES - ROUNDABOUT 16	B
DD593	VEHICLE SIGHT LINES - INTERSECTION OF ROADS 12 & 14	B
DD594	VEHICLE SIGHT LINES - INTERSECTION OF ROADS 14 & 16	B
DD595	VEHICLE SIGHT LINES - INTERSECTION OF ROADS 12 & 16	B
DD596	VEHICLE SIGHT LINES - INTERSECTION OF ROADS 15 & 16	B
DD597	VEHICLE SIGHT LINES - INTERSECTION OF ROADS 12 & 17	B
DD598	VEHICLE SIGHT LINES - INTERSECTION OF ROAD 17 & PYLE RD EAST	B
DD600 - STORMWATER		
DD600	STORMWATER PLAN - OVERVIEW	B
DD601	STORMWATER PLAN - SHEET 1	B
DD602	STORMWATER PLAN - SHEET 2	B
DD603	STORMWATER PLAN - SHEET 3	B

DD604	STORMWATER PLAN - SHEET 4	B
DD605	STORMWATER PLAN - SHEET 5	B
DD606	STORMWATER PLAN - SHEET 6	B
DD607	STORMWATER PLAN - SHEET 7	B
DD608	STORMWATER PLAN - SHEET 8	B
DD609	STORMWATER PLAN - SHEET 9	B
DD620	STORMWATER CATCHMENT PLAN - OVERVIEW	B
DD621	STORMWATER CATCHMENT PLAN - SHEET 1	B
DD622	STORMWATER CATCHMENT PLAN - SHEET 2	B
DD623	STORMWATER CATCHMENT PLAN - SHEET 3	B
DD624	STORMWATER CATCHMENT PLAN - SHEET 4	B
DD630	STORMWATER LONGSECTIONS - SHEET 1	B
DD631	STORMWATER LONGSECTIONS - SHEET 2	B
DD632	STORMWATER LONGSECTIONS - SHEET 3	B
DD633	STORMWATER LONGSECTIONS - SHEET 4	B
DD634	STORMWATER LONGSECTIONS - SHEET 5	B
DD635	STORMWATER LONGSECTIONS - SHEET 6	B
DD636	STORMWATER LONGSECTIONS - SHEET 7	B
DD637	STORMWATER LONGSECTIONS - SHEET 8	B
DD638	STORMWATER LONGSECTIONS - SHEET 9	B
DD639	STORMWATER LONGSECTIONS - SHEET 10	B
DD640	STORMWATER LONGSECTIONS - SHEET 11	B
DD641	STORMWATER LONGSECTIONS - SHEET 12	B
DD642	STORMWATER LONGSECTIONS - SHEET 13	B
DD643	STORMWATER LONGSECTIONS - SHEET 14	B
DD644	STORMWATER LONGSECTIONS - SHEET 15	B
DD645	STORMWATER LONGSECTIONS - SHEET 16	B
DD646	STORMWATER LONGSECTIONS - SHEET 17	B
DD647	STORMWATER LONGSECTIONS - SHEET 18	B
DD648	STORMWATER LONGSECTIONS - SHEET 19	B
DD649	STORMWATER LONGSECTIONS - SHEET 20	B
DD650	STORMWATER LONGSECTIONS - SHEET 21	B
DD651	STORMWATER LONGSECTIONS - SHEET 22	B
DD652	STORMWATER LONGSECTIONS - SHEET 23	B
DD653	STORMWATER LONGSECTIONS - SHEET 24	B
DD654	STORMWATER LONGSECTIONS - SHEET 25	B
DD655	STORMWATER LONGSECTIONS - SHEET 26	B
DD656	STORMWATER LONGSECTIONS - SHEET 27	B
DD680	TYPICAL MANHOLE DETAILS	B
DD681	TYPICAL SUMP DETAILS & SADDLE CONNECTION DETAILS	B
DD682	TYPICAL INLET & OUTLET STRUCTURES	B
DD683	TYPICAL STORMWATER & SEWER CONNECTIONS	B
DD684	TYPICAL TRENCH & HEADWALL DETAILS	B
DD685	BOUNDARY KIT WITH EXTENDED STUBS	B
DD686	FLUSHING POINT DETAIL	B
DD687	2010 IP SIMPLEX 800 x 200 IP	B
DD688	TYPICAL BRANCH ARRANGEMENT	B
DD690	POND DETAILS	B
DD691	POND CROSS SECTIONS	B


PHILIP COOK
WDC IQP#014

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 www.coco.co.nz Whangarei Auckland Wellington Christchurch	C		PROJECT DETAILS	TITLE	DATE CREATED	DRAWN	DESIGNED	APPROVED
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	A	1st ISSUE	07-12-22 KH PC	DRAWING INDEX SHEET 1	CCL REF NO	SCALE	STATUS	FOR APPROVAL
	REV.	REVISION DETAILS	DRAWN APP.	DD001	14333-009	NTS @ A3	REVISION	B

DD700 - SANITARY SEWER		
DD700	SANITARY SEWER PLAN - OVERVIEW	B
DD701	SANITARY SEWER PLAN - SHEET 1	B
DD702	SANITARY SEWER PLAN - SHEET 2	B
DD703	SANITARY SEWER PLAN - SHEET 3	B
DD704	SANITARY SEWER PLAN - SHEET 4	B
DD710	SANITARY SEWER LONGSECTIONS - SHEET 1	B
DD711	SANITARY SEWER LONGSECTIONS - SHEET 2	B
DD712	SANITARY SEWER LONGSECTIONS - SHEET 3	B
DD713	SANITARY SEWER LONGSECTIONS - SHEET 4	B
DD714	SANITARY SEWER LONGSECTIONS - SHEET 5	B
DD715	SANITARY SEWER LONGSECTIONS - SHEET 6	B
DD716	SANITARY SEWER LONGSECTIONS - SHEET 7	B
DD717	SANITARY SEWER LONGSECTIONS - SHEET 8	B
DD718	SANITARY SEWER LONGSECTIONS - SHEET 9	B
DD719	SANITARY SEWER LONGSECTIONS - SHEET 10	B
DD720	SANITARY SEWER LONGSECTIONS - SHEET 11	B
DD721	SANITARY SEWER LONGSECTIONS - SHEET 12	B
DD722	SANITARY SEWER LONGSECTIONS - SHEET 13	B
DD723	SANITARY SEWER LONGSECTIONS - SHEET 14	B
DD724	SANITARY SEWER LONGSECTIONS - SHEET 15	B
DD725	SANITARY SEWER LONGSECTIONS - SHEET 16	B
DD726	SANITARY SEWER LONGSECTIONS - SHEET 17	B
DD727	SANITARY SEWER LONGSECTIONS - SHEET 18	B
DD728	SANITARY SEWER LONGSECTIONS - SHEET 19	B

DD800 - POTABLE WATER		
DD800	POTABLE WATER PLAN - OVERVIEW	B
DD801	POTABLE WATER PLAN - SHEET 1	B
DD802	POTABLE WATER PLAN - SHEET 2	B
DD803	POTABLE WATER PLAN - SHEET 3	B
DD804	POTABLE WATER PLAN - SHEET 4	B
DD805	POTABLE WATER PLAN - SHEET 5	B
DD820	POTABLE WATER TYPICAL DETAILS - SHEET 1	B
DD821	POTABLE WATER TYPICAL DETAILS - SHEET 2	B
DD822	POTABLE WATER TYPICAL DETAILS - SHEET 3	B

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Hamish Anderson
09/02/2024



PHILIP COOK
WDC IQP#014

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	A	1st ISSUE	07-12-22 KH PC			CCL REF NO 14333-009	SCALE NTS @ A3	STATUS FOR APPROVAL	
	REV.	REVISION DETAILS	DRAWN APP.			DWG NUMBER DD002	REVISION B		

GENERAL

G1: THIS SET OF DRAWINGS IS TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATION AND ALL OTHER CONTRACT DRAWINGS.

G2: THE DRAWINGS ARE A DIAGRAMMATIC REPRESENTATION OF THE WORK TO BE CARRIED OUT ONLY AND DIMENSIONS SHALL NOT BE OBTAINED BY SCALING.

G3: ALL DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER FOR DECISIONS BEFORE PROCEEDING WITH THE WORK.

G4: THE CONTRACTOR IS TO CONFIRM THE LOCATION AND LEVEL OF ALL UNDERGROUND SERVICES PRIOR TO UNDERTAKING ANY EARTHWORKS OR FOUNDATION CONSTRUCTION.

G5: ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT CODES OF PRACTICE EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION AND/OR DRAWINGS:

- NZS 3101:2017 CONCRETE STRUCTURES STANDARD
- NZS 3109 CONCRETE CONSTRUCTION
- NZS 3121 WATER AND AGGREGATE FOR CONCRETE
- AS/NZS 4671 STEEL REINFORCING MATERIALS

G6: GENERAL ABBREVIATIONS

- NTS - NOT TO SCALE
- UNO - UNLESS NOTED OTHERWISE
- FFL - FINISHED FLOOR LEVEL
- EGL - EXISTING GROUND LEVEL
- FGL - FINISHED GROUND LEVEL

G7: WHERE PROPRIETARY PRODUCTS ARE SPECIFIED IN THE DOCUMENTS THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE PRODUCT FOR APPROVAL AND SUBJECT TO WDC APPROVAL.

G8: ALL WORKS ARE TO COMPLY WITH THE HEALTH & SAFETY AT WORK ACT 2015.

G9: ALL WORKS TO COMPLY WITH THE WHANGAREI DISTRICT COUNCIL (WDC) ENGINEERING STANDARDS 2010, THE WDC QUALITY ASSURANCE / QUALITY CONTROL MANUAL VESTED ASSETS, THE WDC ENGINEERING PLAN APPROVAL LETTER, AND NZS4404:2010.

G10: WDC STANDARD DETAILS HAVE NOT BEEN INDEPENDENTLY VERIFIED BY COOK COSTELLO. WE HAVE ACCEPTED THAT THEY WILL PERFORM FOR THE REQUIRED LIFE EXPECTANCY AS STATED IN THE WDC EES 2010. WE ACCEPT NO LIABILITY IF THE STANDARD DETAILS DO NOT ACHIEVE THIS DESIGN LIFE.

G11: WDC INSPECTIONS REQUIRED IN ACCORDANCE WITH EES, ONLY WDC APPROVED CONTRACTORS TO WORK ON WDC RETICULATION (OR THAT TO VEST), REINSTATEMENT, WRITTEN APPROVAL PRIOR TO UNDERTAKING WORKS WITHIN PRIVATE PROPERTY, WORKS ARE TO COMPLY WITH EES, CONTRACTOR IS RESPONSIBLE FOR LOCATING SERVICES PRIOR TO EXCAVATION, AS-BUILT REQUIREMENTS ETC. WDC TO PROVIDE WRITTEN CERTIFICATION WHERE THEY UNDERTAKE TESTING AND INSPECTION.

G12: THE CONTRACTOR MUST REINSTATE AND/OR REPAIR DAMAGE TO THE KERB & CHANNELING AND FOOTPATH ALONG THE PROPERTY ROADSIDE FRONTAGE. REFER EES 2010 (CLAUSE 1.10.9).

G13: SITE SURVEY, EXISTING SEWER, STORMWATER, AND POTABLE WATER, BASED ON DIGITAL AS-BUILT DATA RECEIVED. COORDINATES ARE IN TERMS OF NZGD 2000 MT EDEN CIRCUIT 2000. VERTICAL DATUM IN TERMS OF ONE TREE POINT 1964. ALL LEVELS AND CONNECTION POINTS TO BE CHECKED AND CONFIRMED ON SITE PRIOR TO CONSTRUCTION.

G14: EROSION CONTROL - ALL SILT CONTROL MEASURES SHALL BE PLACED PRIOR TO COMMENCEMENT OF EARTHWORKS. SUCH MEASURES SHALL BE SUBJECT TO FURTHER ADDITIONS AND ALTERATIONS, WHERE CONSIDERED NECESSARY, AS DIRECTED BY THE PROJECT MANAGER OR COUNCIL, DURING THE PROGRESSION OF WORKS. IT IS ADVISED TO CONTACT NRC PRIOR TO COMMENCEMENT OF EARTHWORKS, AFTER INSTALLATION OF EROSION AND SEDIMENT CONTROL DEVICES TO ENSURE THEY HAVE BEEN INSTALLED TO THE SATISFACTION OF NRC.

EARTHWORKS

E1: ALL PROJECT PAVEMENT SIZES AND DETAILS INDICATED IN THIS DRAWING SET ARE BASED ON A CBR OF 12%.

E2: ALL SITE EARTHWORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF NZS4431. SOIL BEARING CAPACITY IS TO BE VERIFIED UPON COMPLETION OF SITE EARTHWORKS AND DURING FOUNDATION EXCAVATION TO ENSURE ACTUAL SITE CONDITIONS ARE COMPATIBLE WITH THE INFERRED GEOTECHNICAL MODEL. OVER EXCAVATION AND BACKFILLING WITH ENGINEERED FILL OR SITE CONCRETE MAY BE NECESSARY WHERE SOFT SOIL / FILL IS ENCOUNTERED WITH PRIOR VARIATION APPROVAL.

E3: COMPACTION IN BASE OF PIPE TRENCHES TO ACHIEVE CLEGG 10.

E4: NES VALIDATION TESTING TO BE UNDERTAKEN BY A CONTAMINATED LAND SQEP ON TOPSOIL STOCKPILES PRIOR TO USE OR SPREADING. TESTING SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE GUIDELINES SET OUT WITHIN CONTAMINATED LAND MANAGEMENT GUIDELINE NO 5. SITE VALIDATION REPORT IS TO BE COMPLETED PRIOR TO COMPLETION OF WORKS AND SUBMITTED TO COUNCIL.

CONCRETE

C1: ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH NZS3109 AND NZS3101 SUBJECT TO RELEVANT SECTIONS OF THE SPECIFICATION.

C2: NO CONCRETE SHALL BE PLACED UNTIL THE DESIGNER HAS HAD THE OPPORTUNITY TO OBSERVE THAT THE DRAWINGS AND SPECIFICATIONS HAVE BEEN COMPLIED WITH.

C3: ALL CONCRETE SUPPLY AND PRODUCTION SHALL BE IN ACCORDANCE WITH NZS 3104, 3101:2017.

C4: WHERE THE LOCATION OF CONSTRUCTION JOINTS IS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS, CONSTRUCTION JOINTS SHALL BE COORDINATED WITH THE ENGINEER AS REQUIRED. THE CONSTRUCTOR SHALL ALLOW FOR ALL SUCH CONSTRUCTION JOINTS.

CONCRETE PAVEMENTS

CP1: UPON EXPOSURE OF SUBGRADE AT PAVEMENT BASE CONTACT ENGINEER FOR INSPECTION AND INSTRUCTION TO REMOVE AND REPLACE ANY SOFT AREAS PRIOR TO COMMENCING CONSTRUCTION OF PAVEMENT LAYERS. EXCAVATED MATERIAL TO BE REMOVED FROM SITE.

CP2: SUPPLY AND COMPACT BASECOURSE LAYER IN ACCORDANCE WITH CROSS SECTIONS SUPPLIED.

CP3: CONCRETE USED SHALL BE SPECIAL GRADE WITH 28 DAY COMPRESSIVE STRENGTH OF 30MPA.

CP4: ALL JOINTS SHALL BE INSTALLED AT THE LOCATIONS INDICATED. SAW CUT JOINTS SHALL BE CUT WITHIN 24 HOURS OF CONCRETE PLACEMENT.

CP5: ALL CONCRETE SHALL BE CURED BY AN APPROVED METHOD FOR AT LEAST 7 DAYS AFTER POURING. CURING METHOD SHALL BE PROPOSED TO ENGINEER FOR APPROVAL. SOME PROPRIETARY SURFACE TREATMENTS MAY NOT BE APPROVED.

CP6: SLAB SURFACE TOLERANCES SHALL NOT EXCEED 5MM DEVIATION IN A 3M STRAIGHT EDGE.

CP7: SLAB THICKNESSES GIVEN ARE MINIMUM THICKNESSES AND EXCLUSIVE OF ANY APPLIED FINISHES.

CP8: SLAB SURFACES SHALL BE NEATLY BROOM FINISHED.

CP9: ALL SLAB JOINTS ARE TO BE SEALED WITH AN APPROVED WATERPROOF FLEXIBLE SEALANT AFTER 28 DAYS AND PRIOR TO PRACTICAL COMPLETION.

INSPECTIONS / SITE VISITS REQUIRED

I1: PRE-CONSTRUCTION SITE MEETING WITH CONTRACTOR, ENGINEER AND WDC PRESENT. NRC TO BE INFORMED OF WORKS ON SITE PRIOR TO COMMENCING WORKS.

I2: STRIPPED GROUND INSPECTIONS OF ROADS, ROW'S, CROSSING AND SITE FILL AREAS.

I3: CONTROLLED FILL TESTING TO BRING FILL UP TO SUBGRADE LEVELS TO BE CONSTRUCTED IN 200mm MAX LIFTS AND TESTED EVERY 600mm.

I4: FINAL INSPECTION WITH, ENGINEER AND CONTRACTOR TO ENSURE ALL WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED ENGINEERING PLANS FOR FINAL SIGNOFF.

I5: ALL OTHER INSPECTIONS AS REQUIRED IN THE APPROVED INSPECTIONS AND TEST PLAN (ITP). ALL WORKS SHOULD ENSURE THE INSPECTION AND TEST PLAN IS CAREFULLY ACTIONED PRIOR TO PROCEEDING WITH CONSTRUCTION.

ASBUILT CHECKLIST

AB1: PEAT STRIP SURFACE AND UNDERCUT OF UNSUITABLE MATERIAL (IF ANY).

AB2: SUBGRADE BULK EARTHWORKS SAND SURFACE .

AB3: PEAT AND TOPSOIL RESPREAD

ACID SULPHATES

AS1: ALL CONCRETE MANHOLES, CESSPITS, HEADWALLS & PIPES TO BE HYDURA CONCRETE.

AS2: ALL STORMWATER, GRAVITY SEWER, LOW PRESSURE SEWER AND WATERMAIN PIPES TO HAVE FULL SURROUND PIPE EMBEDMENT IN ACCORDANCE WITH THE BEDDING DETAILS ON SHEET DD684.

AS3: ALL MANHOLE HAUNCHING TO BE 30MPa CONCRETE.

AS4: ALL METAL FITTINGS OR CONNECTIONS TO BE COATED WITH PAINT OR WRAPPED FOR PROTECTION.

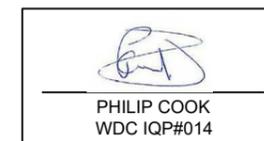
AS5: LIME TO BE APPLIED AT A RATE OF 0.5KG/M2 DIRECTLY UNDER ALL CONCRETE KERBS, FOOTPATHS, CROSSINGS AND JOAL'S.

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LEGEND:

STORMWATER

	EXISTING STORMWATER
	EXISTING MANHOLES
	EXISTING CESSPITS
	PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
	PROPOSED 100mmØ uPVC STORMWATER CONNECTION
	PROPOSED STORMWATER HYDURA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
	PROPOSED HYDURA CONCRETE HEADWALL
	PROPOSED STORMWATER HYDURA CONCRETE CESSPITS
	PROPOSED END CAP
	STORMWATER SWALE 200mm DEEP WITH 1:4 BATTERS

SEWER

	EXISTING SEWER
	EXISTING MANHOLES
	PROPOSED LOW PRESSURE SEWER
	PROPOSED ISOLATION VALVE
	PROPOSED FLUSH POINT
	PROPOSED END CAP
	PROPOSED REDUCER
	PROPOSED BOUNDARY KIT - TO BE LOCATED WITHIN ROAD RESERVE
	ISOLATION VALVE IN MANHOLE PIT FOR FUTURE PROVISION TO INSTALL AIR VALVE IF REQUIRED.

POTABLE WATER

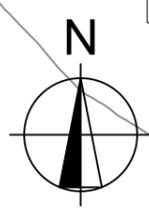
	EXISTING POTABLE WATER
	EXISTING FIRE HYDRANT
	EXISTING VALVES
	Ø50 (63OD) PE80 PN12.5
	Ø100 (125OD) PE80 PN12.5
	Ø150 (180OD) PE80 PN12.5
	PROPOSED SLUICE VALVE
	PROPOSED PEET VALVE
	PROPOSED REDUCED
	PROPOSED FIRE HYDRANT
	PROPOSED END CAP
	PROPOSED SERVICE CONNECTION TERMINATION POINT
	PROPOSED JOAL CONNECTION
	PROPOSED MULTI BOX
	STAGE 6 & 7 BOUNDARY



PHILIP COOK
WDC IQP#014

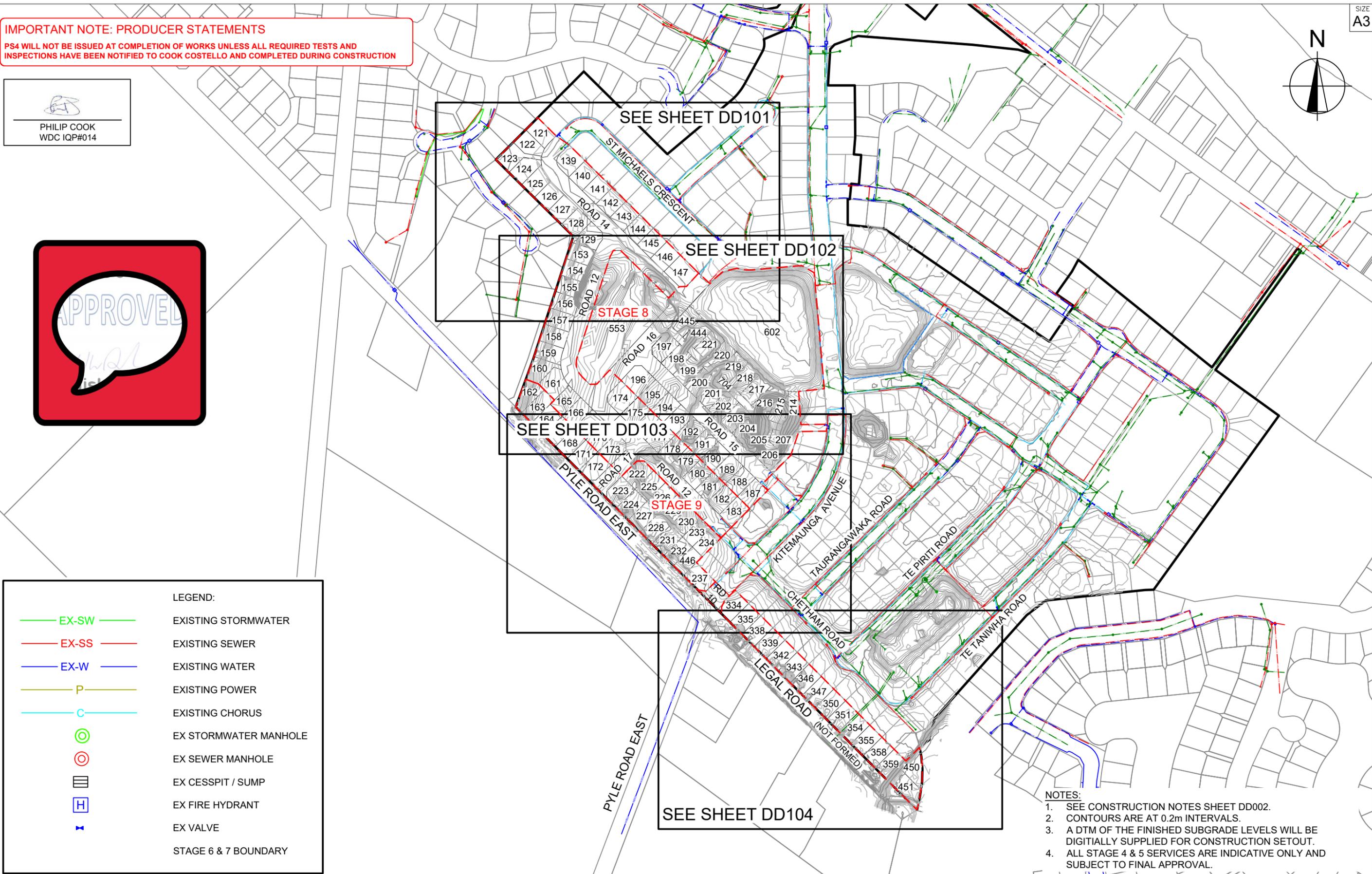
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	REV.	REVISION DETAILS	DRAWN APP.			DWG NUMBER DD004		REVISION B	

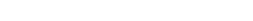


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PHILIP COOK
WDC IQP#014



SCALE 1:4000
150
100
50
0

LEGEND:	
	EXISTING STORMWATER
	EXISTING SEWER
	EXISTING WATER
	EXISTING POWER
	EXISTING CHORUS
	EX STORMWATER MANHOLE
	EX SEWER MANHOLE
	EX CESSPIT / SUMP
	EX FIRE HYDRANT
	EX VALVE
	STAGE 6 & 7 BOUNDARY

- NOTES:
- SEE CONSTRUCTION NOTES SHEET DD002.
 - CONTOURS ARE AT 0.2m INTERVALS.
 - A DTM OF THE FINISHED SUBGRADE LEVELS WILL BE DIGITALLY SUPPLIED FOR CONSTRUCTION SETOUT.
 - ALL STAGE 4 & 5 SERVICES ARE INDICATIVE ONLY AND SUBJECT TO FINAL APPROVAL.

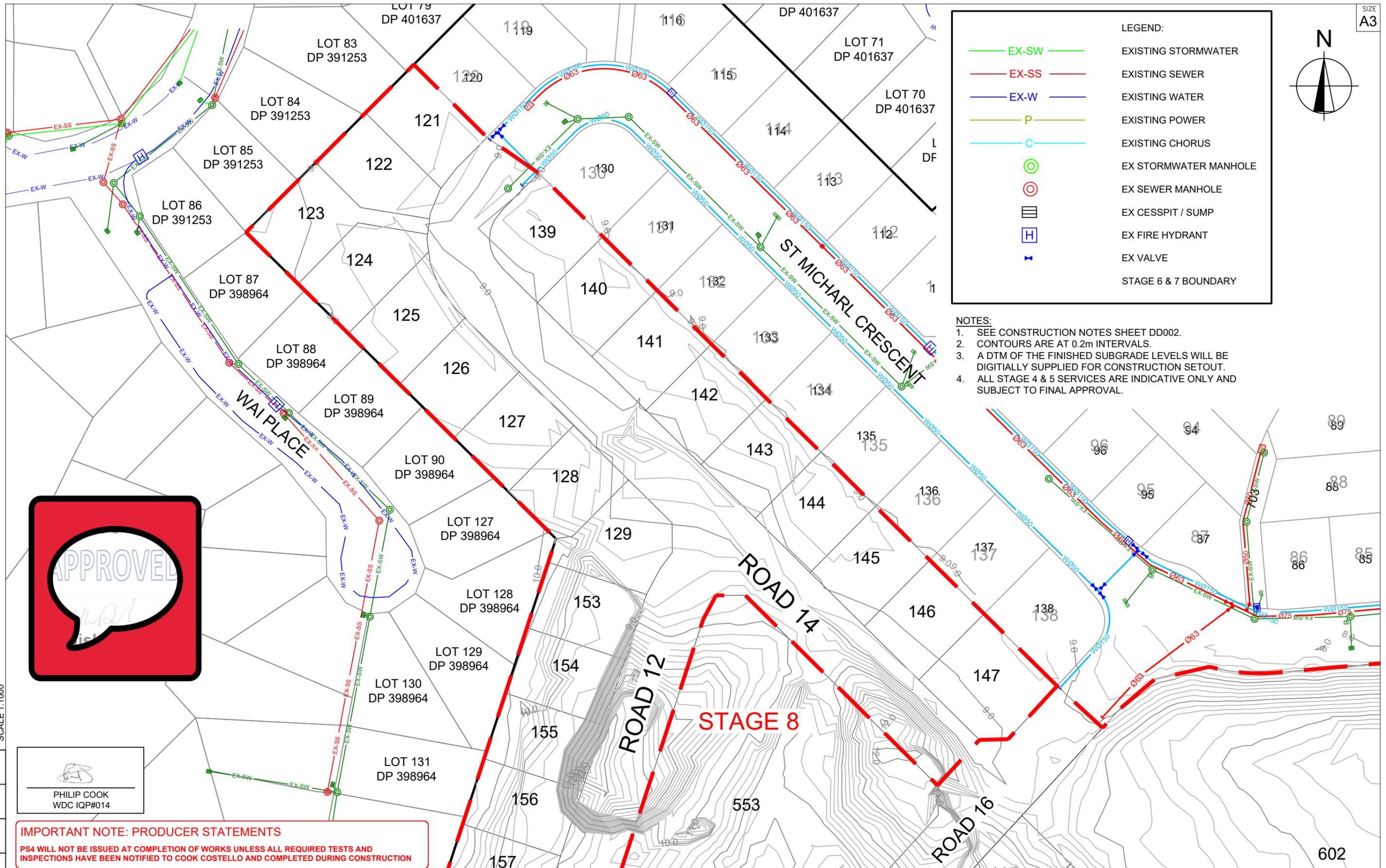
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	REV.	REVISION DETAILS	DRAWN APP.			14333-009	1:4000 @ A3	FOR APPROVAL	
					DWG NUMBER	DD100	REVISION	B	



LEGEND:

- EX-SW — EXISTING STORMWATER
- EX-SS — EXISTING SEWER
- EX-W — EXISTING WATER
- P — EXISTING POWER
- C — EXISTING CHORUS
- ⊙ EX STORMWATER MANHOLE
- ⊙ EX SEWER MANHOLE
- EX CESSPIT / SUMP
- H EX FIRE HYDRANT
- ▶ EX VALVE
- STAGE 6 & 7 BOUNDARY

- NOTES:**
1. SEE CONSTRUCTION NOTES SHEET DD002.
 2. CONTOURS ARE AT 0.2m INTERVALS.
 3. A DTM OF THE FINISHED SUBGRADE LEVELS WILL BE DIGITALLY SUPPLIED FOR CONSTRUCTION SETOUT.
 4. ALL STAGE 4 & 5 SERVICES ARE INDICATIVE ONLY AND SUBJECT TO FINAL APPROVAL.



PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:1000



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
EXISTING SERVICES PLAN
 SHEET 1

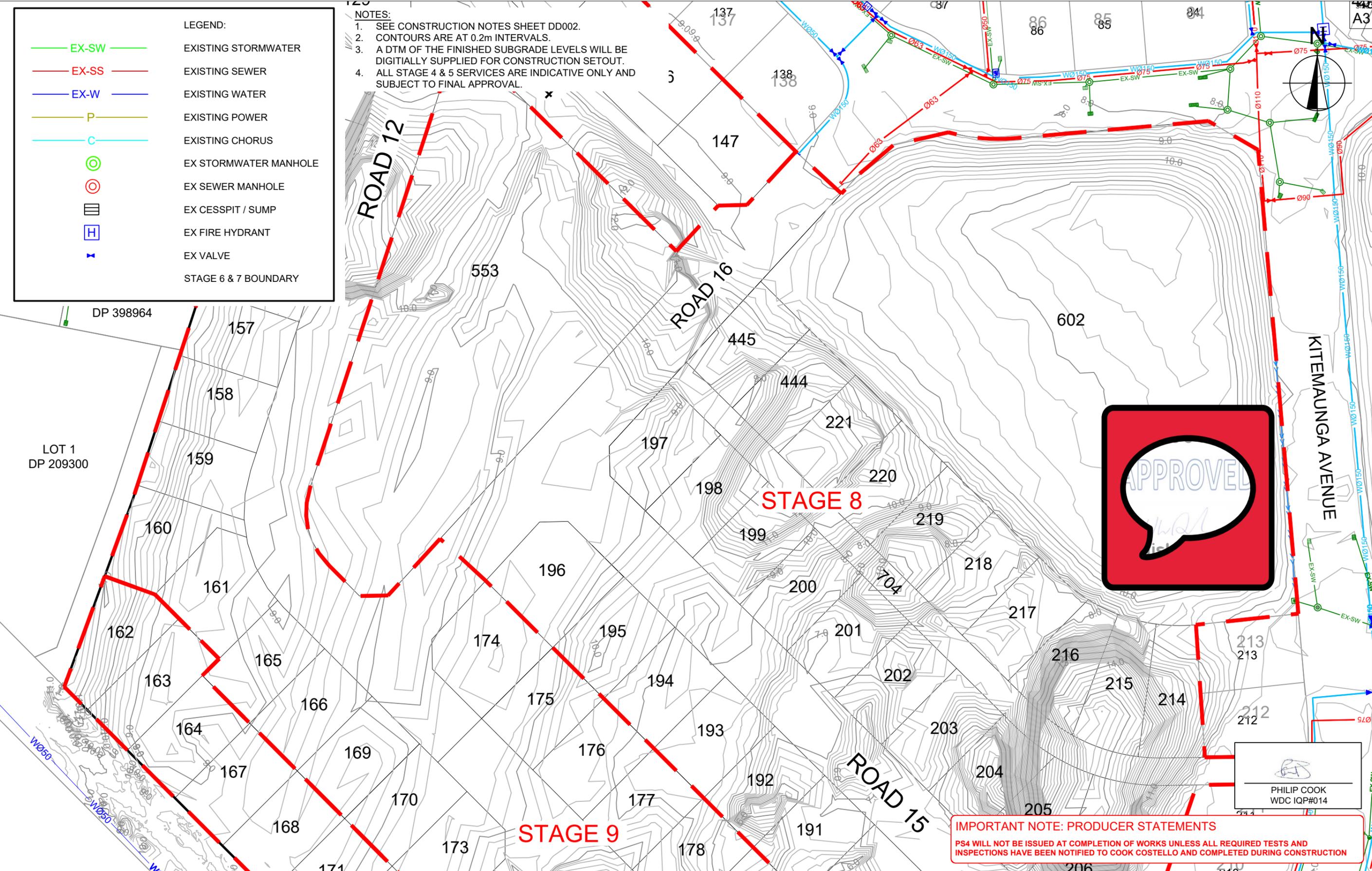
DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD101	REVISION	B				

LEGEND:

- EX-SW EXISTING STORMWATER
- EX-SS EXISTING SEWER
- EX-W EXISTING WATER
- P EXISTING POWER
- C EXISTING CHORUS
- EX STORMWATER MANHOLE
- EX SEWER MANHOLE
- EX CESSPIT / SUMP
- EX FIRE HYDRANT
- EX VALVE
- STAGE 6 & 7 BOUNDARY

NOTES:

- SEE CONSTRUCTION NOTES SHEET DD002.
- CONTOURS ARE AT 0.2m INTERVALS.
- A DTM OF THE FINISHED SUBGRADE LEVELS WILL BE DIGITALLY SUPPLIED FOR CONSTRUCTION SETOUT.
- ALL STAGE 4 & 5 SERVICES ARE INDICATIVE ONLY AND SUBJECT TO FINAL APPROVAL.



PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



REV.	REVISION DETAILS	DATE	DRAWN	APP.
C				
B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC

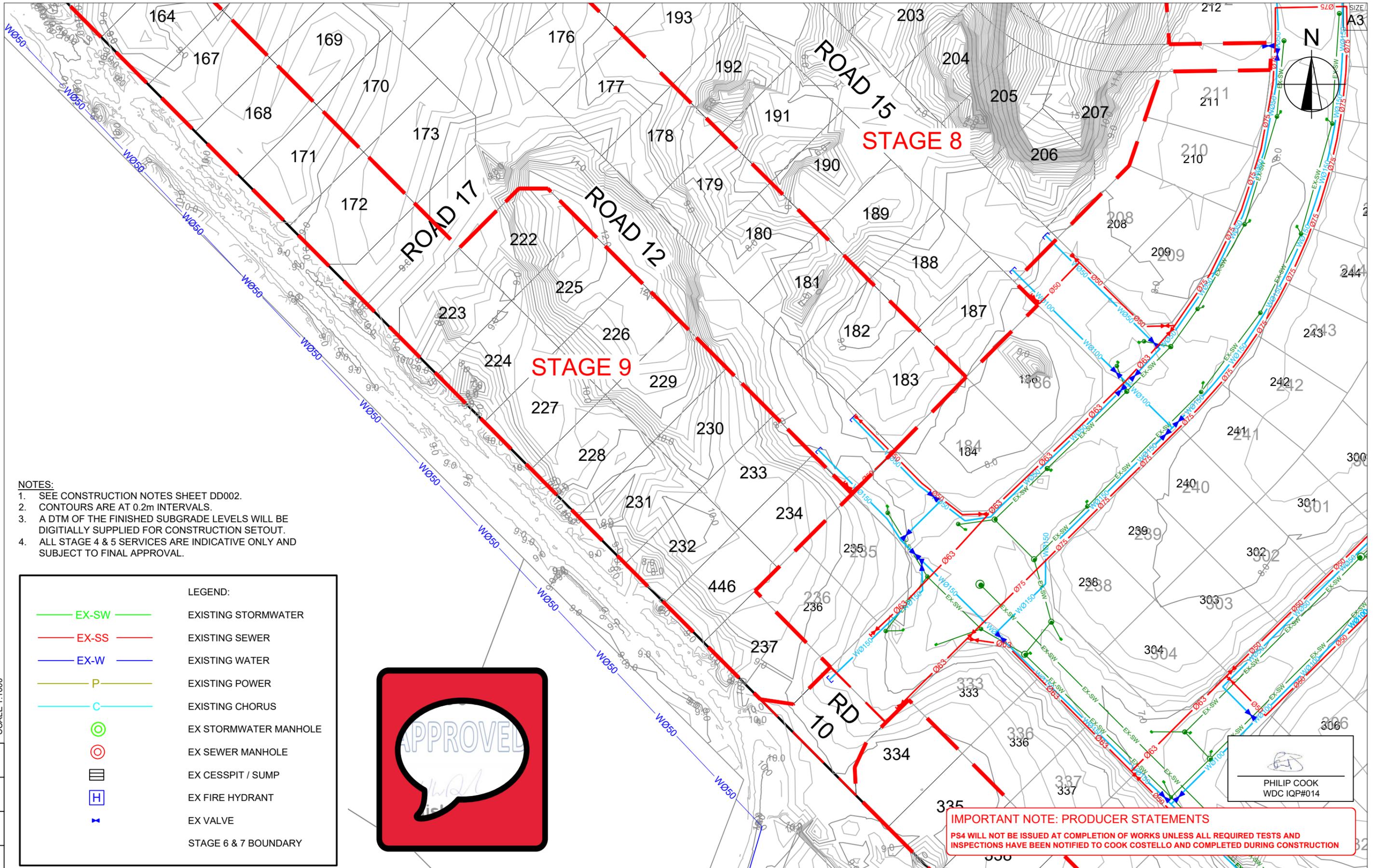
PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

EXISTING SERVICES PLAN
SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:1000 @ A3	FOR APPROVAL	
DWG NUMBER		REVISION	
DD102		B	



- NOTES:**
1. SEE CONSTRUCTION NOTES SHEET DD002.
 2. CONTOURS ARE AT 0.2m INTERVALS.
 3. A DTM OF THE FINISHED SUBGRADE LEVELS WILL BE DIGITALLY SUPPLIED FOR CONSTRUCTION SETOUT.
 4. ALL STAGE 4 & 5 SERVICES ARE INDICATIVE ONLY AND SUBJECT TO FINAL APPROVAL.

LEGEND:	
	EX-SW EXISTING STORMWATER
	EX-SS EXISTING SEWER
	EX-W EXISTING WATER
	P EXISTING POWER
	C EXISTING CHORUS
	EX STORMWATER MANHOLE
	EX SEWER MANHOLE
	EX CESSPIT / SUMP
	EX FIRE HYDRANT
	EX VALVE
	STAGE 6 & 7 BOUNDARY



PHILIP COOK
 WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

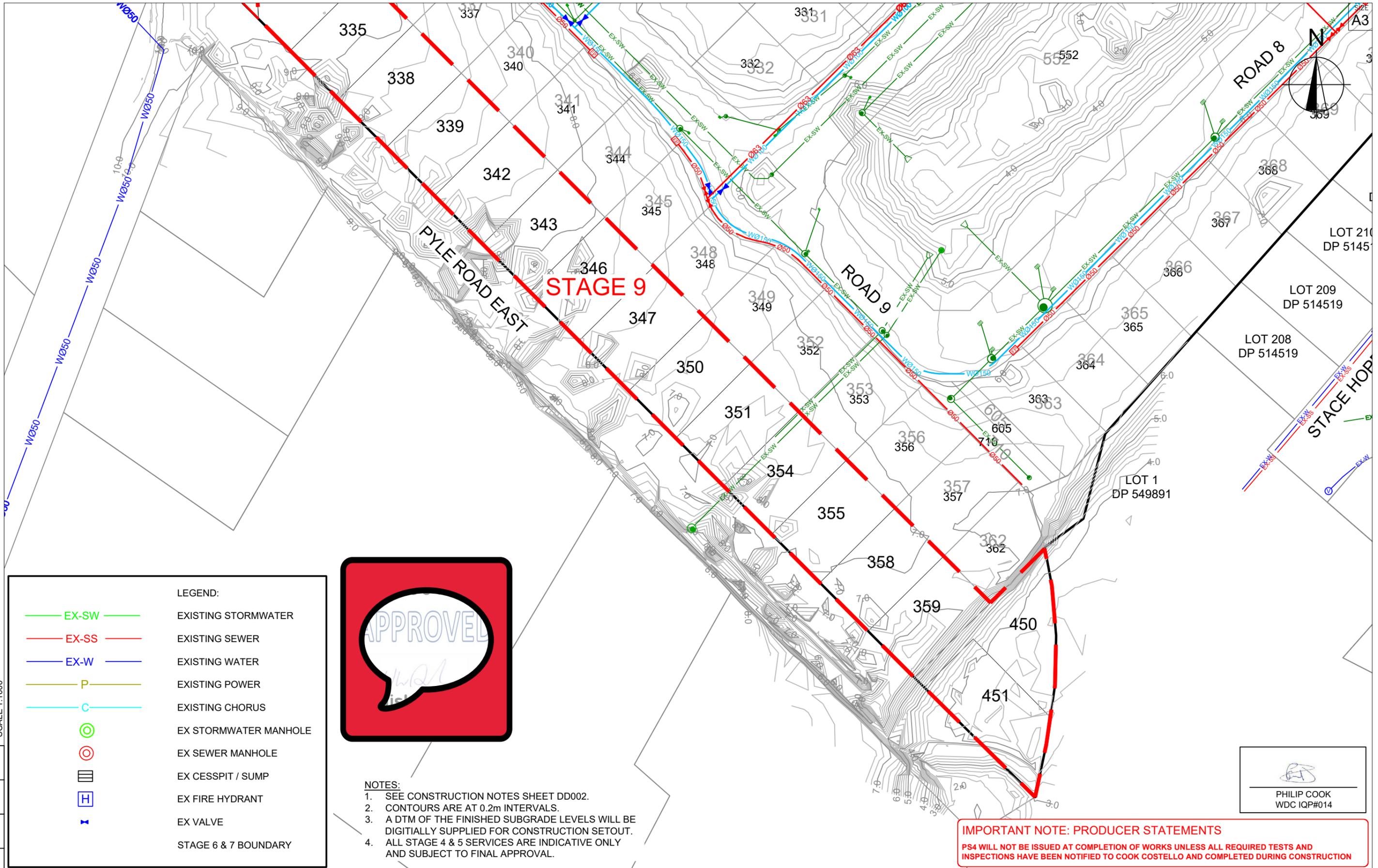
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C		
B	PLAN SET UPDATED	17-03-23 KH PC
A	1st ISSUE	07-12-22 KH PC
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
EXISTING SERVICES PLAN
SHEET 3

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD103		REVISION	B			



LEGEND:	
	EXISTING STORMWATER
	EXISTING SEWER
	EXISTING WATER
	EXISTING POWER
	EXISTING CHORUS
	EX STORMWATER MANHOLE
	EX SEWER MANHOLE
	EX CESSPIT / SUMP
	EX FIRE HYDRANT
	EX VALVE
	STAGE 6 & 7 BOUNDARY



- NOTES:**
- SEE CONSTRUCTION NOTES SHEET DD002.
 - CONTOURS ARE AT 0.2m INTERVALS.
 - A DTM OF THE FINISHED SUBGRADE LEVELS WILL BE DIGITALLY SUPPLIED FOR CONSTRUCTION SETOUT.
 - ALL STAGE 4 & 5 SERVICES ARE INDICATIVE ONLY AND SUBJECT TO FINAL APPROVAL.

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
 WDC IQP#014

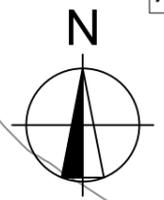
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REV.	REVISION DETAILS	DATE	BY	APP.
C				
B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

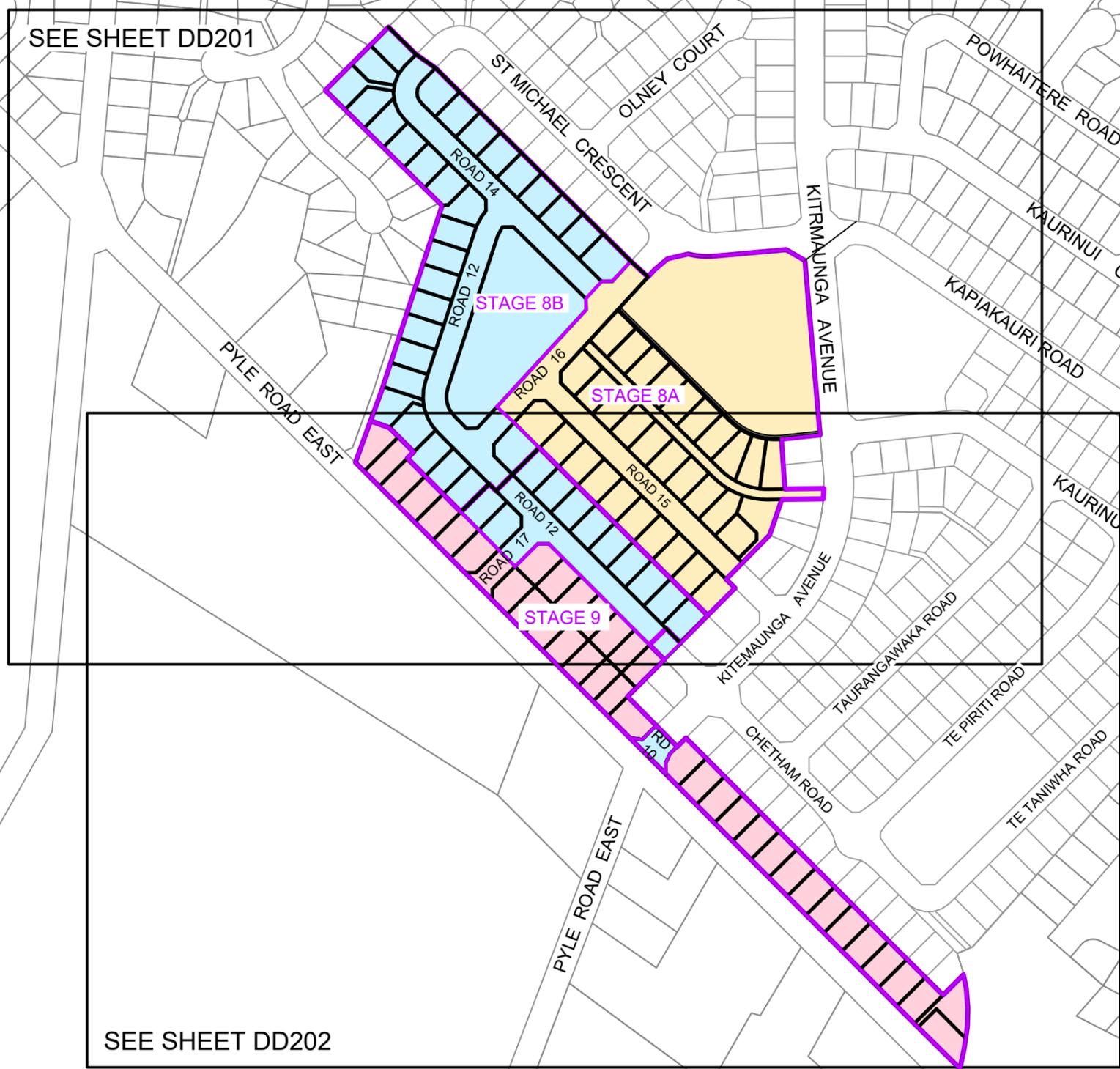
TITLE
EXISTING SERVICES PLAN
SHEET 4

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD104		REVISION	B			



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


PHILIP COOK
WDC IQP#014



SCALE 1:4000
150
100
50
0

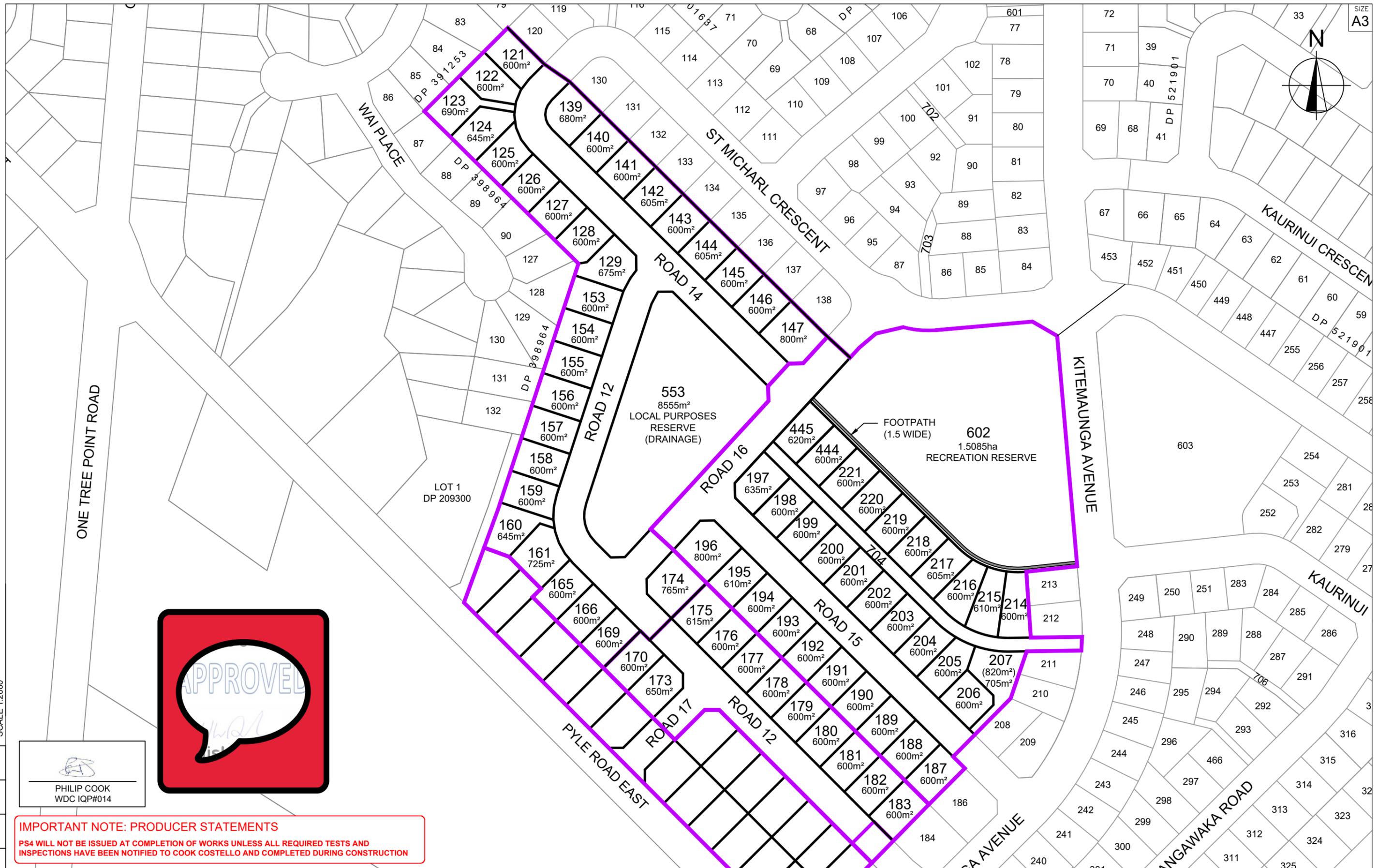


C			
B	PLAN SET UPDATED	17-03-23	
		KH	PC
A	1st ISSUE	07-12-22	
		KH	PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
SUBDIVISION STAGING
OVERVIEW

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:4000 @ A3	STATUS		FOR APPROVAL	
DWG NUMBER	DD200		REVISION		B		



PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



REV.	REVISION DETAILS	DATE	DRAWN	APP.
C				
B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC

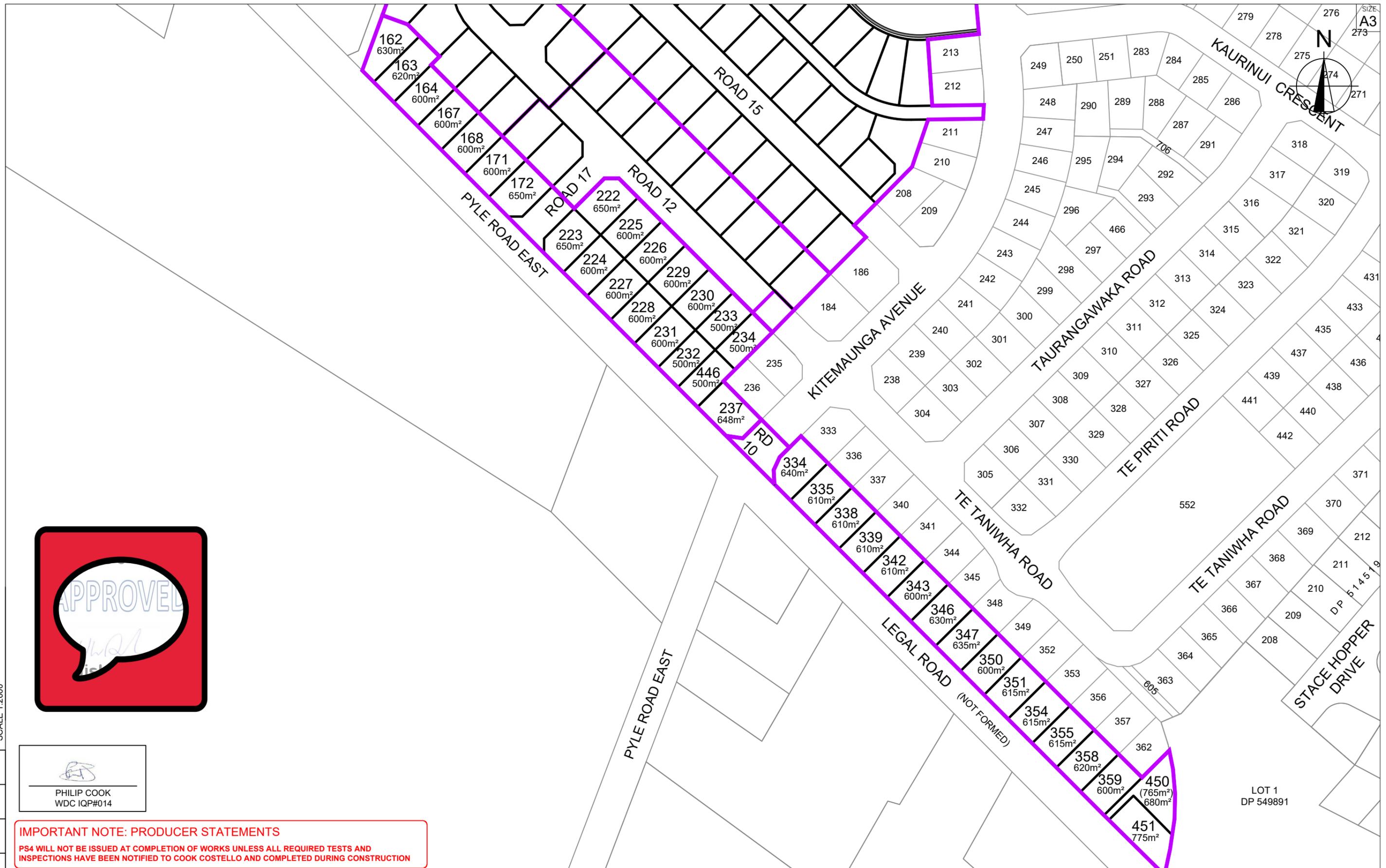
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
PROPOSED LAYOUT
STAGES 8A & 8B

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:2000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD201		REVISION	B			

100 SCALE 1:2000
80
60
40
20
0

0 20 40 60 80 100 SCALE 1:2000



PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

100 SCALE 1:2000
80
60
40
20
0



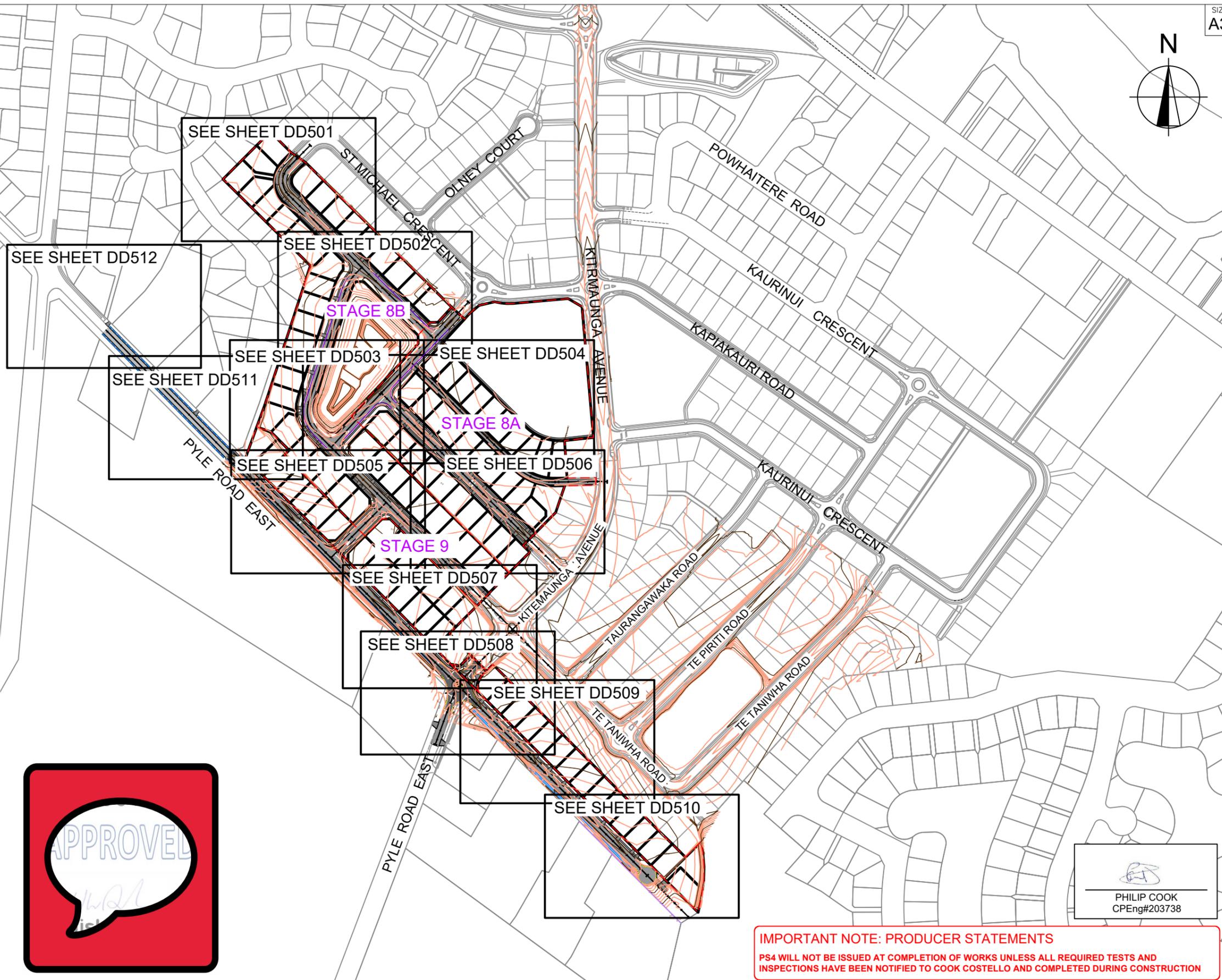
REV.	REVISION DETAILS	DATE	BY	APP.
C				
B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
PROPOSED LAYOUT
STAGE 9

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:2000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD202	REVISION B		

0 20 40 60 80 100 SCALE 1:2000



KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- CONTOUR LABEL
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- E.O.W EXTENT OF WORKS
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE: FOOTPATHS - 100mm, 20MPa ROW'S - 125mm, 30MPa VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC




 PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



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C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

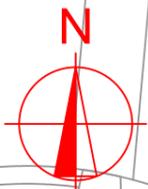
PROJECT DETAILS	WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA
-----------------	--

TITLE	ROADING LAYOUT OVERVIEW
-------	----------------------------

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:4000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD500	REVISION	B				

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


PHILIP COOK
CPEng#203738

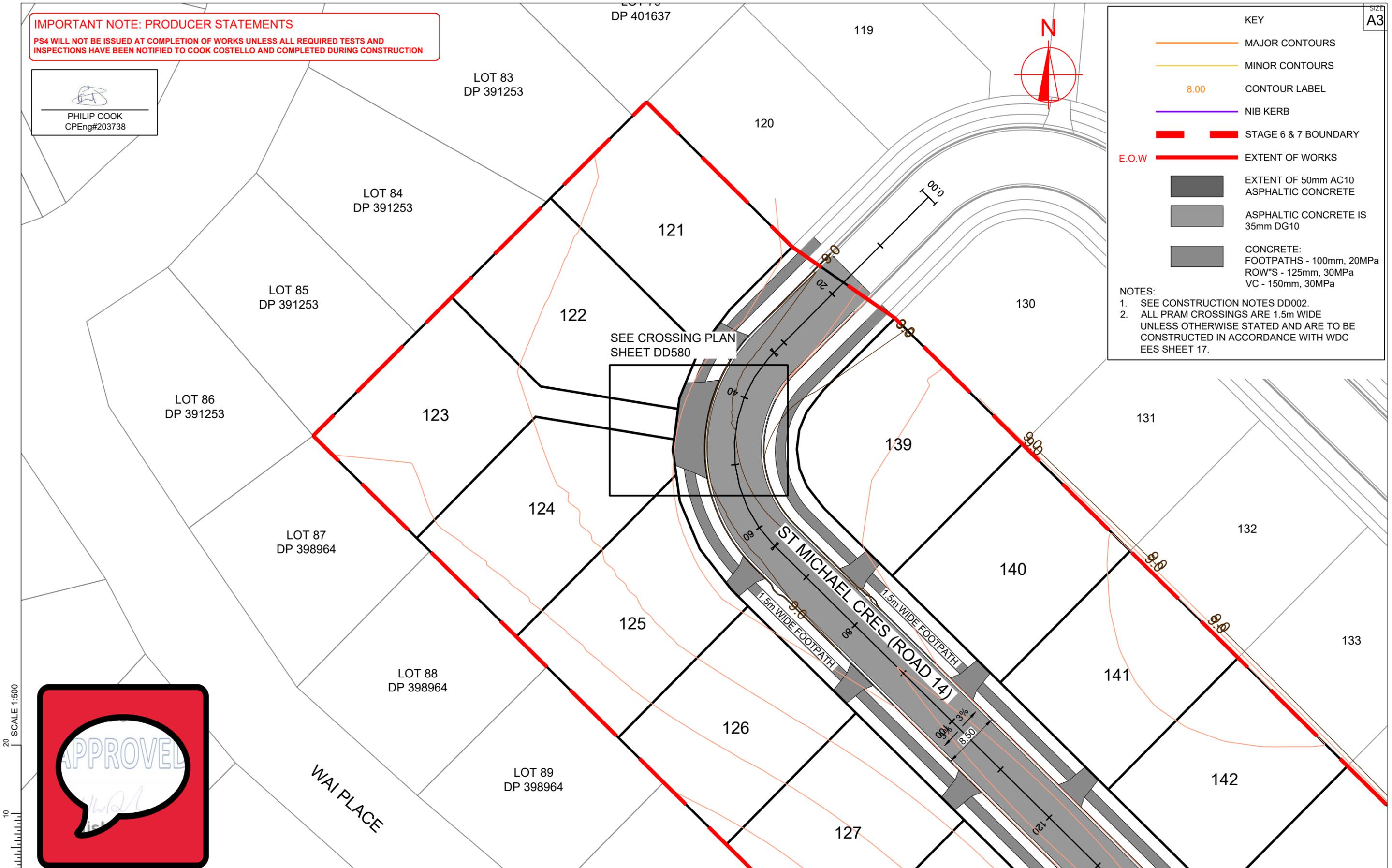


KEY

-  MAJOR CONTOURS
-  MINOR CONTOURS
-  CONTOUR LABEL
-  NIB KERB
-  STAGE 6 & 7 BOUNDARY
-  EXTENT OF WORKS
-  EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
-  ASPHALTIC CONCRETE IS 35mm DG10
-  CONCRETE: FOOTPATHS - 100mm, 20MPa ROW'S - 125mm, 30MPa VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.



SCALE 1:500



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C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

ROADING LAYOUT
SHEET 1

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD501	REVISION	B				

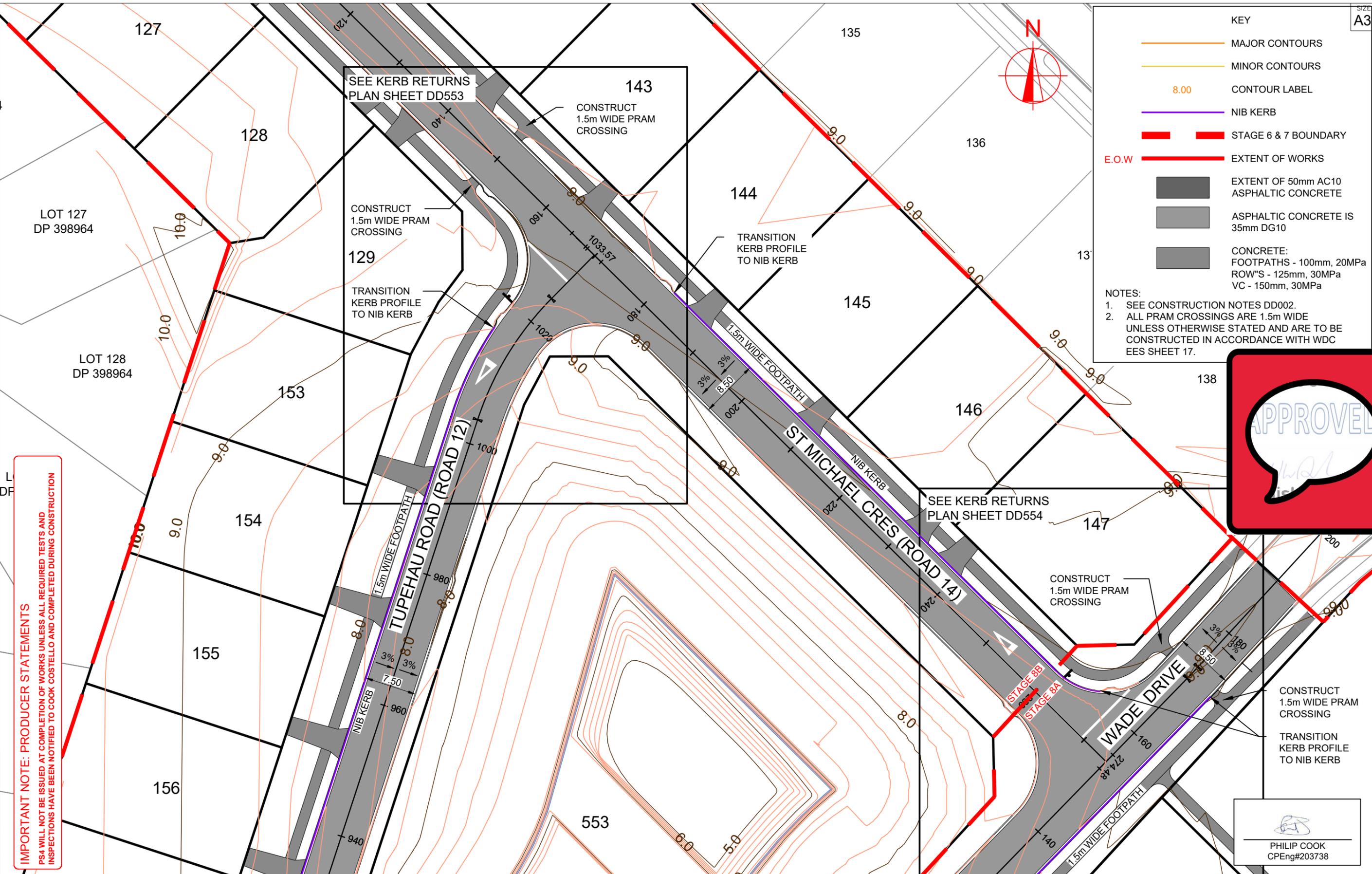
SCALE 1:500

KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- 8.00 CONTOUR LABEL
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- E.O.W EXTENT OF WORKS
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE: FOOTPATHS - 100mm, 20MPa ROW'S - 125mm, 30MPa VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.



IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

L DP SCALE 1:500
 20
 10
 0



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

ROADING LAYOUT
SHEET 2

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD502	REVISION	B				

KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- 8.00 CONTOUR LABEL
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- E.O.W EXTENT OF WORKS
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE: FOOTPATHS - 100mm, 20MPa ROW'S - 125mm, 30MPa VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

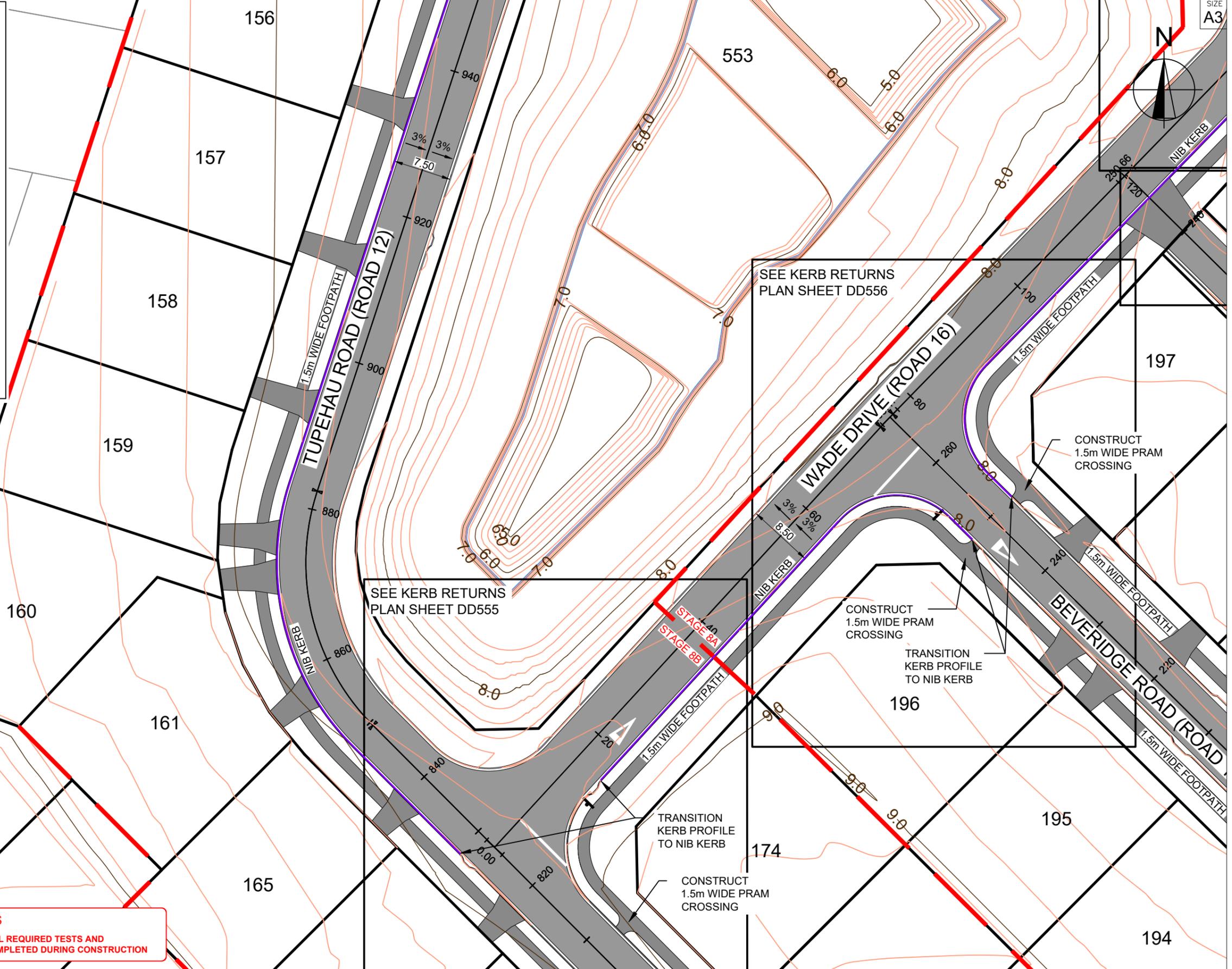
LOT 1 DP 209300



NEW RESIDENTIAL CROSSING TO BE REINSTATED IN ACCORDANCE WITH WDC EES 2010 - SHEET 18

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



SCALE 1:500



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

ROADING LAYOUT
SHEET 3

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD503	REVISION	B				

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


PHILIP COOK
CPEng#203738

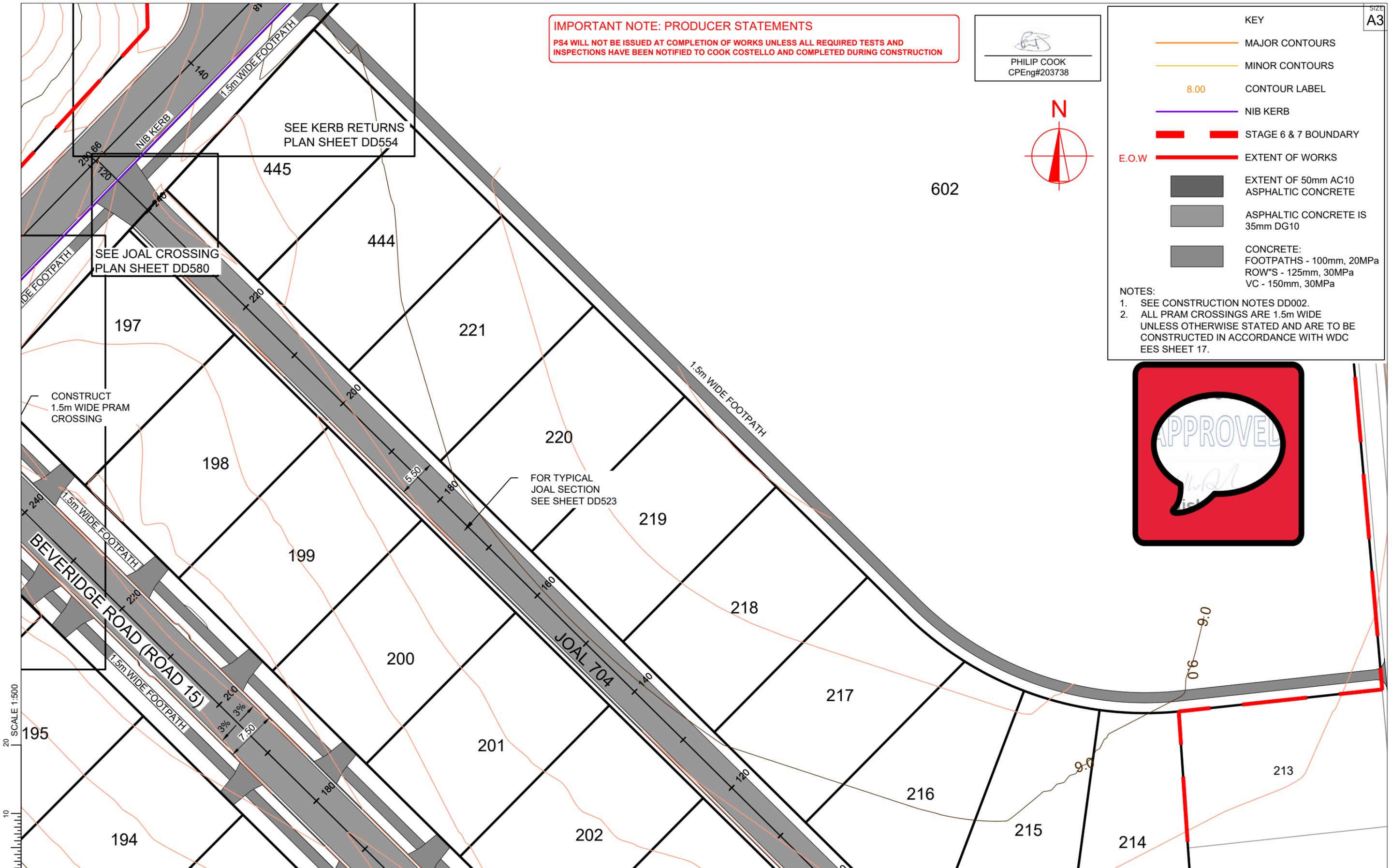


KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- 8.00 CONTOUR LABEL
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- E.O.W. EXTENT OF WORKS
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE: FOOTPATHS - 100mm, 20MPa; ROW'S - 125mm, 30MPa; VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

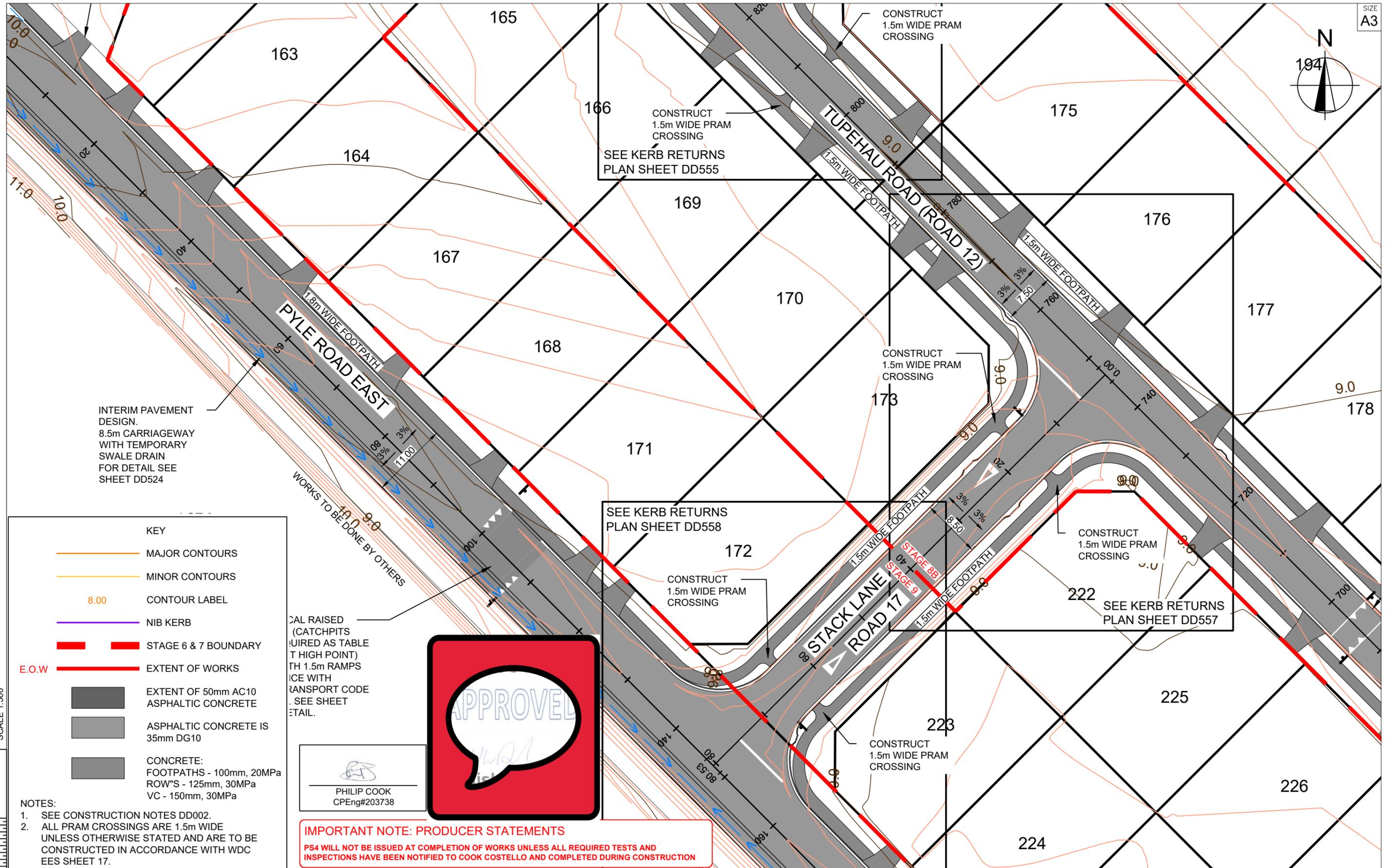
PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

ROADING LAYOUT
SHEET 4

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD504	REVISION	B				



INTERIM PAVEMENT DESIGN. 8.5m CARRIAGEWAY WITH TEMPORARY SWALE DRAIN FOR DETAIL SEE SHEET DD524

KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- CONTOUR LABEL 8.00
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- E.O.W EXTENT OF WORKS
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE: FOOTPATHS - 100mm, 20MPa ROW'S - 125mm, 30MPa VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC DECS SHEET 17.

RAISED (CATCHPITS REQUIRED AS TABLE T HIGH POINT) WITH 1.5m RAMPS TO BE CONSTRUCTED IN ACCORDANCE WITH TRANSPORT CODE FOR DETAIL SEE SHEET DD524.

PHILIP COOK
CPEng#203738



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REV.	REVISION DETAILS	DATE	DRAWN	APP.
C				
B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC

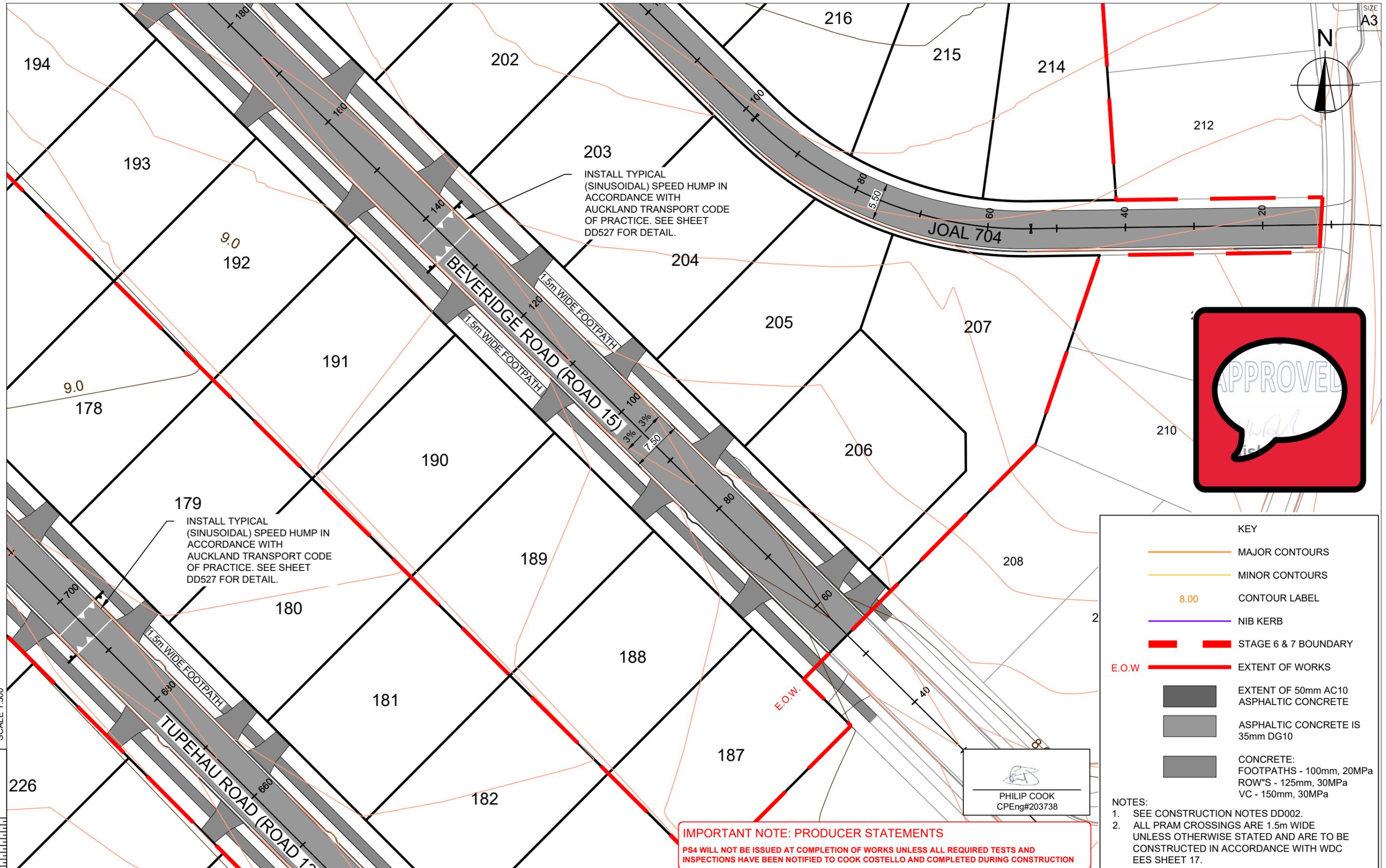
PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

ROADING LAYOUT
SHEET 5

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD505	REVISION	B				



INSTALL TYPICAL (SINUSOIDAL) SPEED HUMP IN ACCORDANCE WITH AUCKLAND TRANSPORT CODE OF PRACTICE. SEE SHEET DD527 FOR DETAIL.

INSTALL TYPICAL (SINUSOIDAL) SPEED HUMP IN ACCORDANCE WITH AUCKLAND TRANSPORT CODE OF PRACTICE. SEE SHEET DD527 FOR DETAIL.



KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- 8.00 CONTOUR LABEL
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- EXTENT OF WORKS
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE: FOOTPATHS - 100mm, 20MPa; ROW'S - 125mm, 30MPa; VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

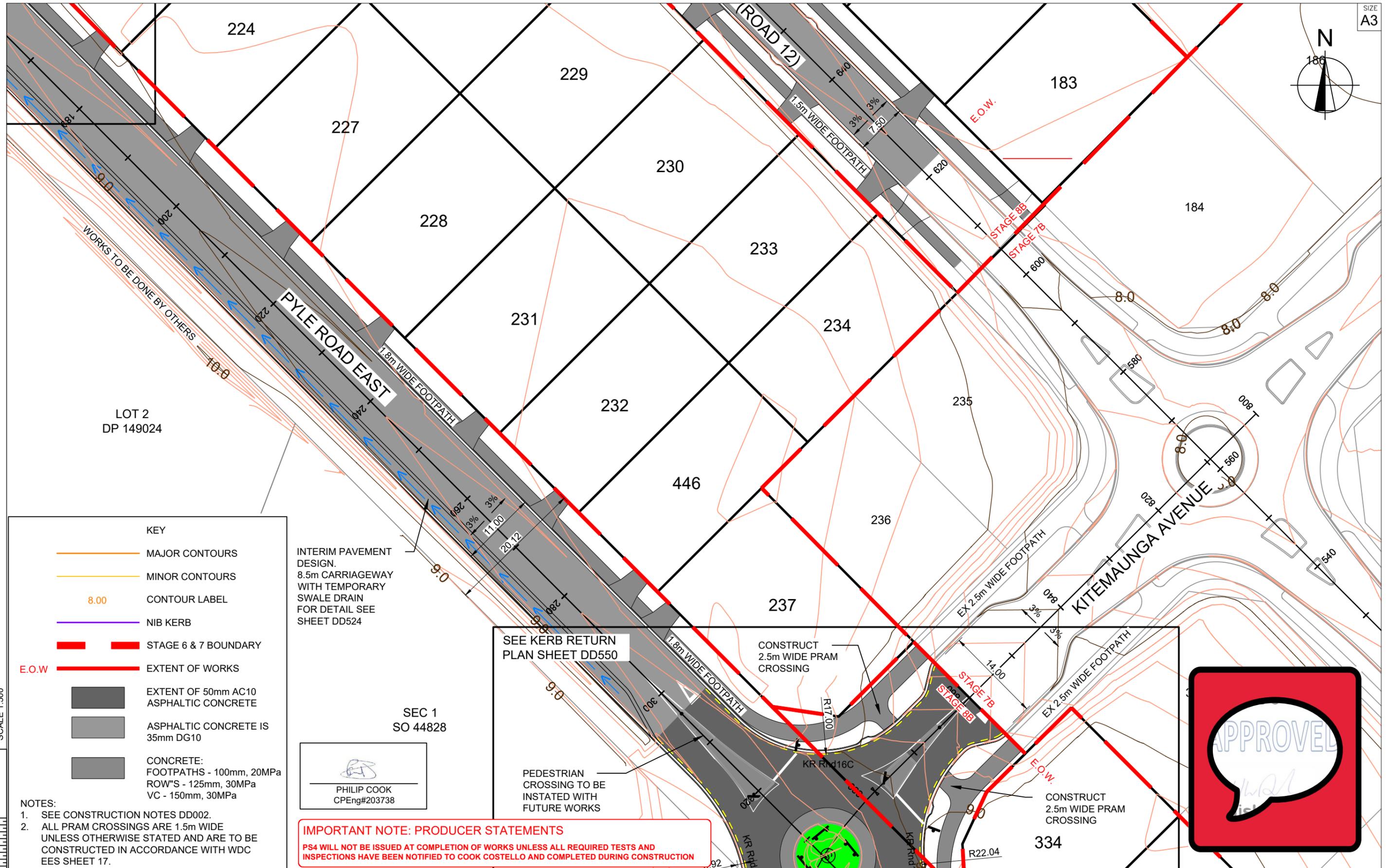
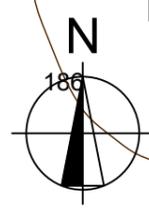
TITLE

ROADING LAYOUT
SHEET 6

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:500 @ A3	FOR APPROVAL	
DWG NUMBER		REVISION	
DD506		B	

SCALE 1:500

SCALE 1:500



KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- CONTOUR LABEL 8.00
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- EXTENT OF WORKS (E.O.W.)
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE: FOOTPATHS - 100mm, 20MPa; ROW'S - 125mm, 30MPa; VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

INTERIM PAVEMENT DESIGN.
8.5m CARRIAGEWAY WITH TEMPORARY SWALE DRAIN FOR DETAIL SEE SHEET DD524

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SEE KERB RETURN PLAN SHEET DD550

CONSTRUCT 2.5m WIDE PRAM CROSSING

PEDESTRIAN CROSSING TO BE INSTATED WITH FUTURE WORKS

CONSTRUCT 2.5m WIDE PRAM CROSSING

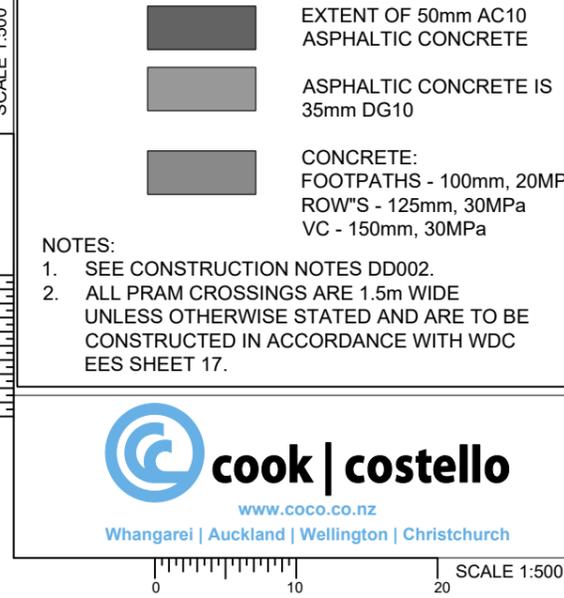


C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS	
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	

TITLE	
ROADING LAYOUT SHEET 7	

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD507	REVISION	B				





IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

INTERIM PAVEMENT DESIGN.
8.5m CARRIAGEWAY WITH TEMPORARY SWALE DRAIN FOR DETAIL SEE SHEET DD524

SEC 1
SO 44828

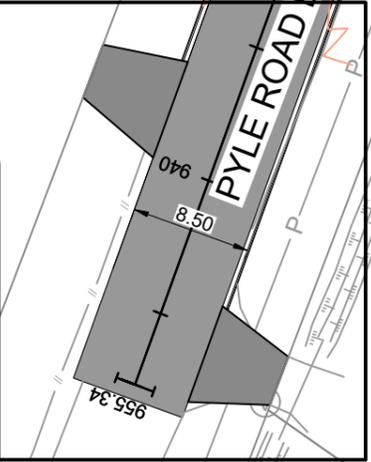
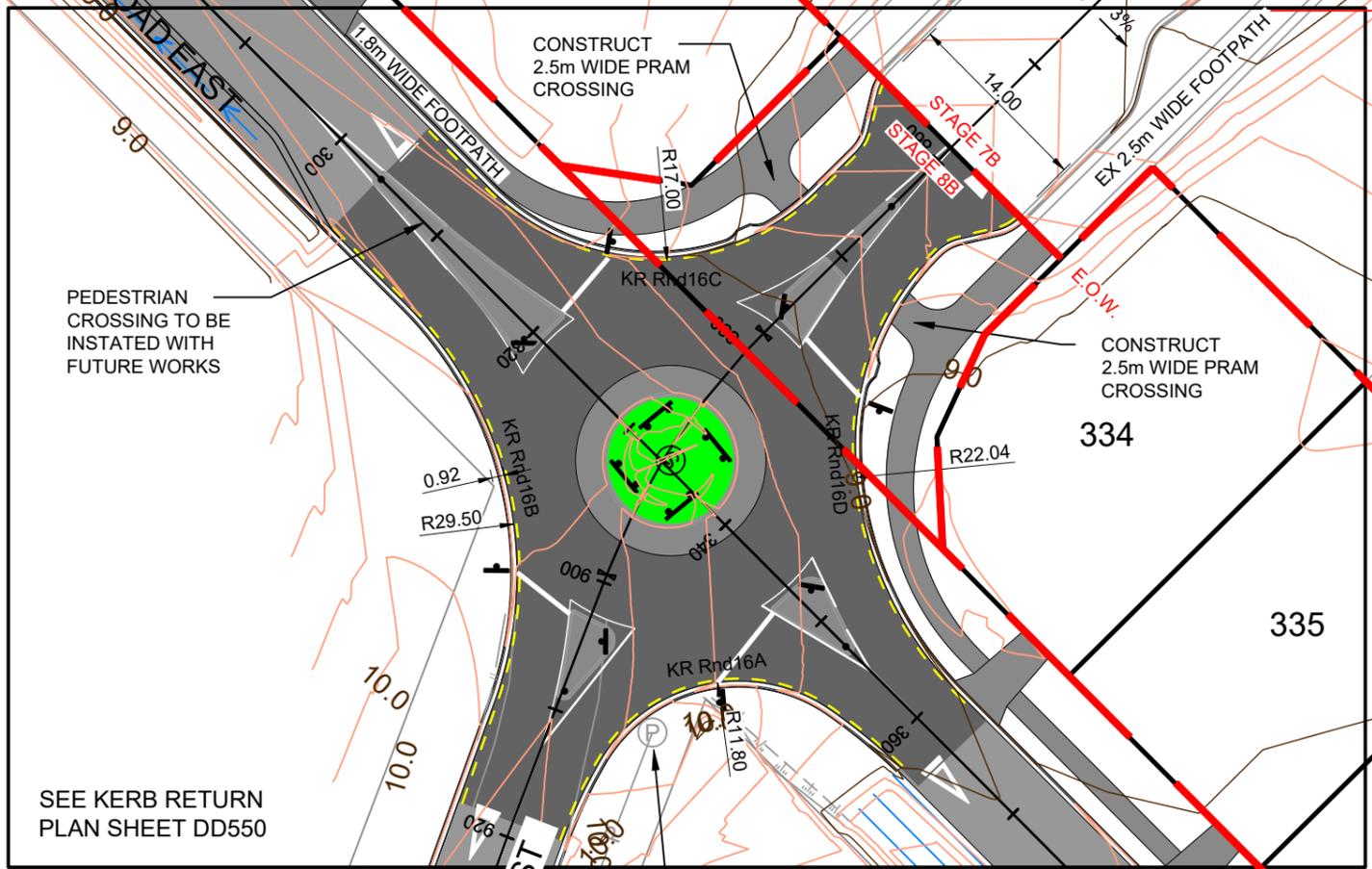

PHILIP COOK
CPEng#203738

KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- CONTOUR LABEL
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- EXTENT OF WORKS
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE: FOOTPATHS - 100mm, 20MPa
ROW'S - 125mm, 30MPa
VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.



SEE KERB RETURN PLAN SHEET DD550

SEE CROSSING PLAN SHEET DD582

LOT 1
DP 502659



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN APP.	

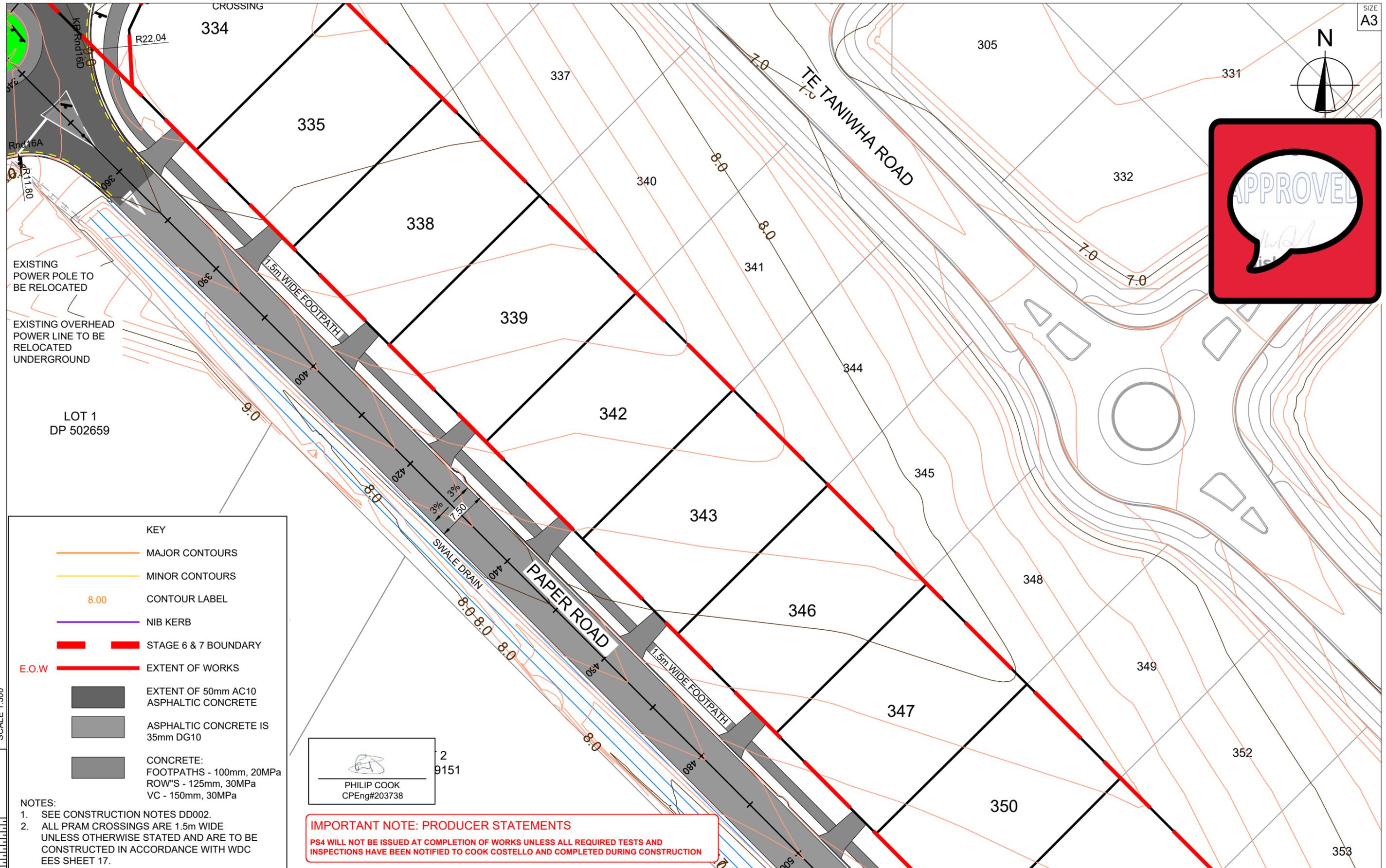
PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

ROADING LAYOUT
SHEET 8

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD508	REVISION	B				



KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- CONTOUR LABEL 8.00
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- EXTENT OF WORKS
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE: FOOTPATHS - 100mm, 20MPa; ROW'S - 125mm, 30MPa; VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

PHILIP COOK
CPEng#203738

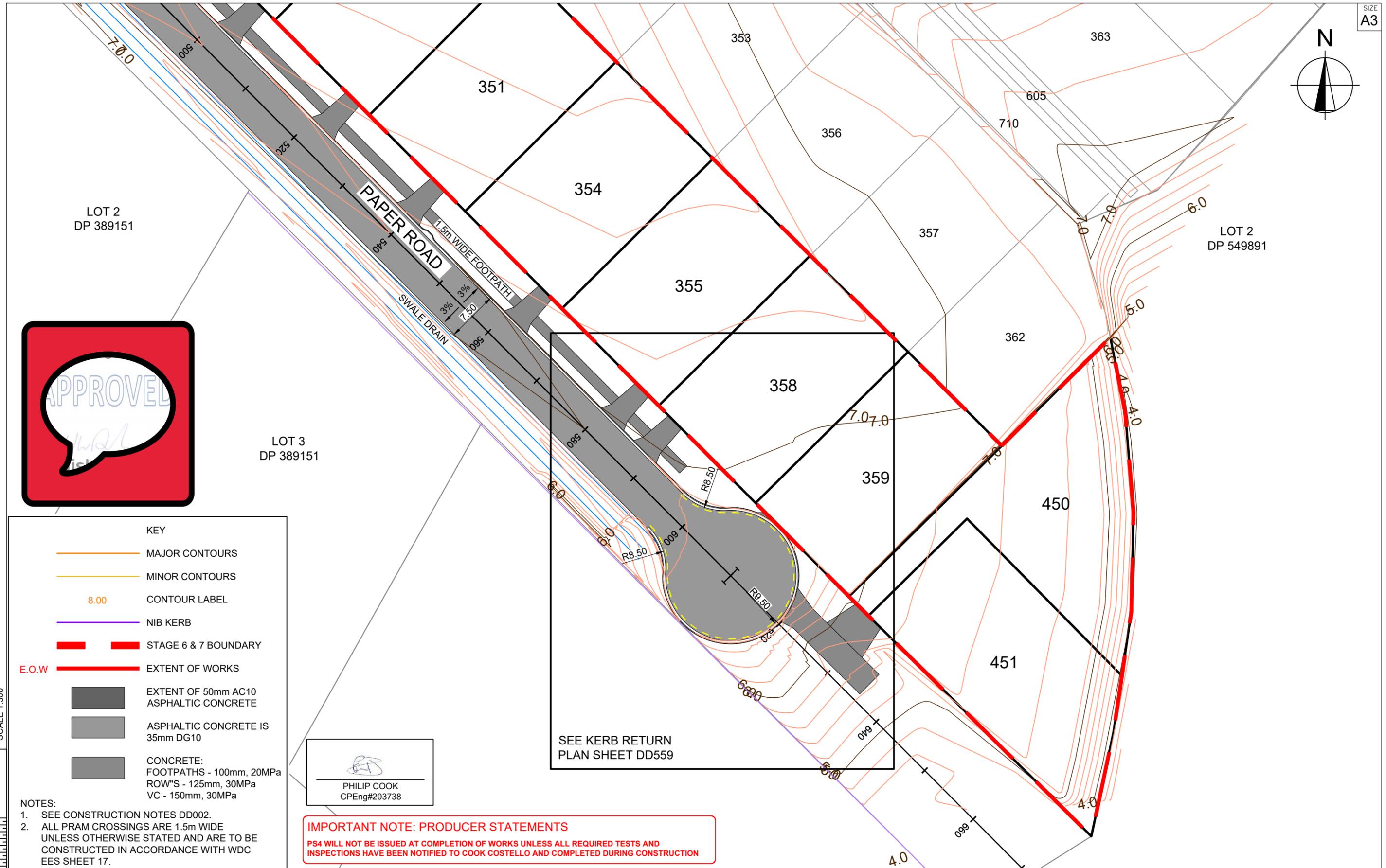
IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS	TITLE
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	ROADING LAYOUT SHEET 9

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD509	REVISION B		



KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- CONTOUR LABEL 8.00
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- E.O.W EXTENT OF WORKS
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE: FOOTPATHS - 100mm, 20MPa; ROW'S - 125mm, 30MPa; VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

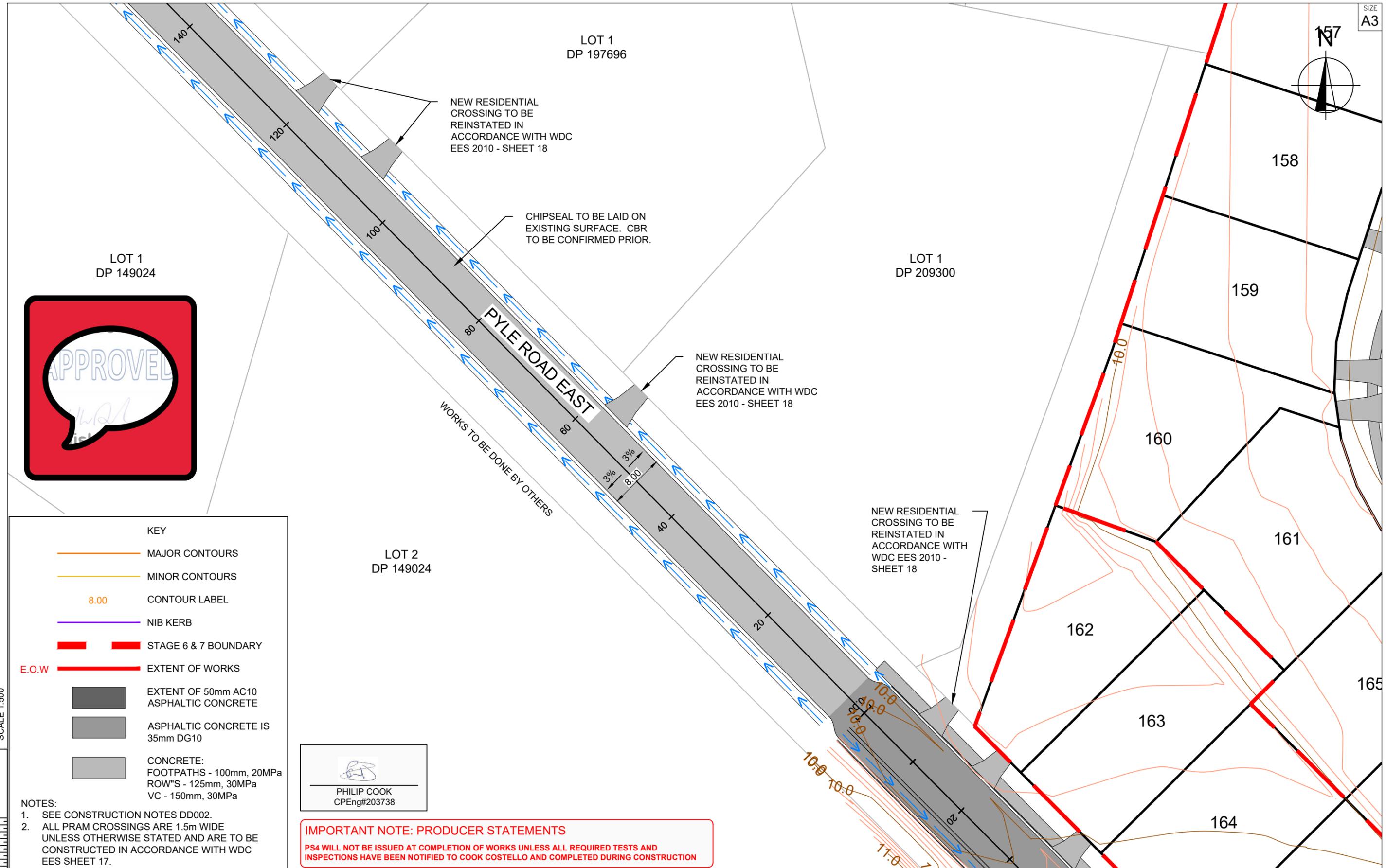
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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING LAYOUT
SHEET 10

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD510	REVISION B		



KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- CONTOUR LABEL 8.00
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- EXTENT OF WORKS
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE: FOOTPATHS - 100mm, 20MPa ROW'S - 125mm, 30MPa VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REVISION DETAILS		DRAWN APP.		PROJECT DETAILS	TITLE
C				WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	ROADING LAYOUT SHEET 11
B	PLAN SET UPDATED	17-03-23	KH PC		
A	1st ISSUE	07-12-22	KH PC		
REV.					

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD511	REVISION B		

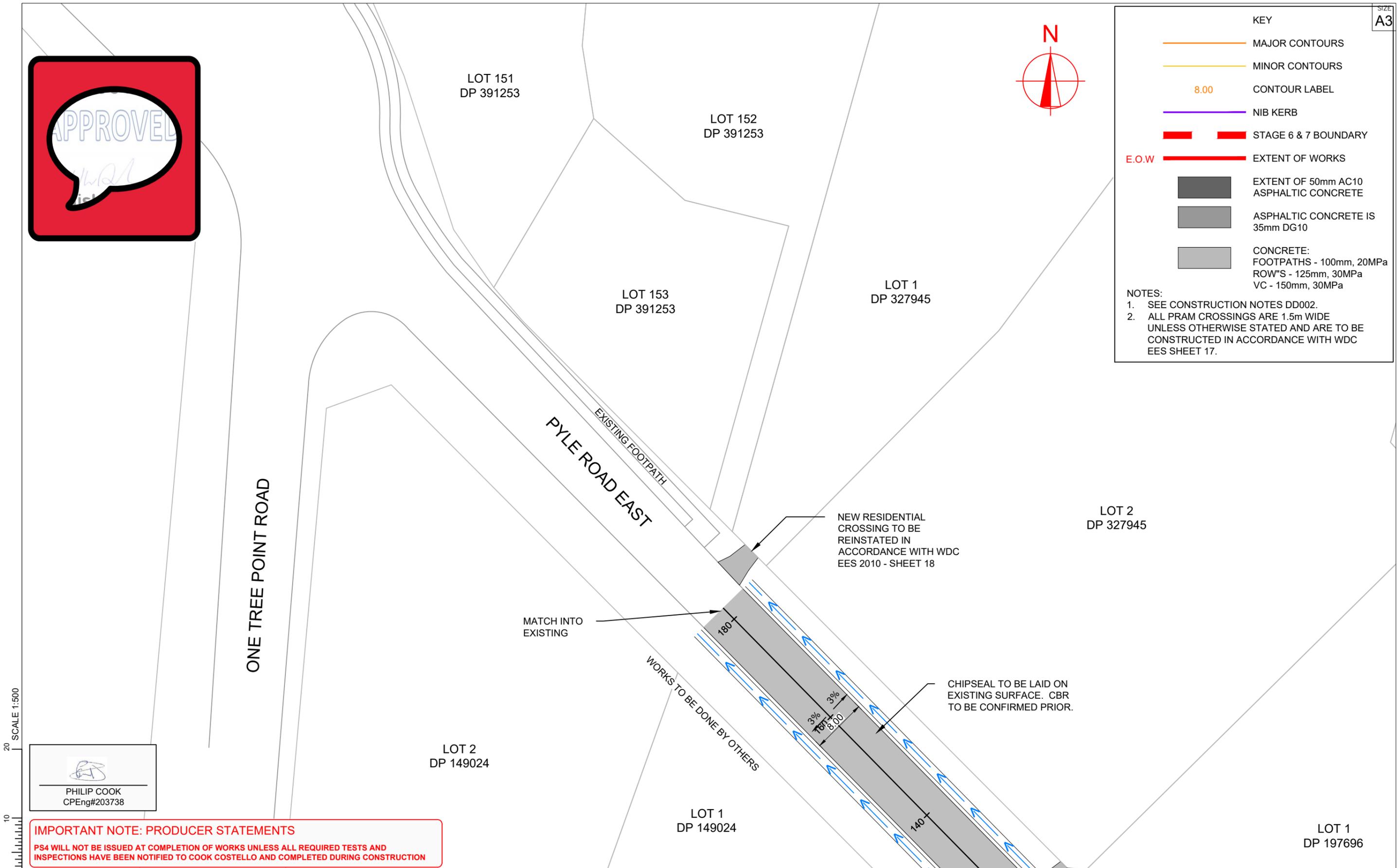


KEY

- MAJOR CONTOURS
- MINOR CONTOURS
- 8.00 CONTOUR LABEL
- NIB KERB
- STAGE 6 & 7 BOUNDARY
- E.O.W EXTENT OF WORKS
- EXTENT OF 50mm AC10 ASPHALTIC CONCRETE
- ASPHALTIC CONCRETE IS 35mm DG10
- CONCRETE:
FOOTPATHS - 100mm, 20MPa
ROW"S - 125mm, 30MPa
VC - 150mm, 30MPa

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL PRAM CROSSINGS ARE 1.5m WIDE UNLESS OTHERWISE STATED AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET 17.



SCALE 1:500

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

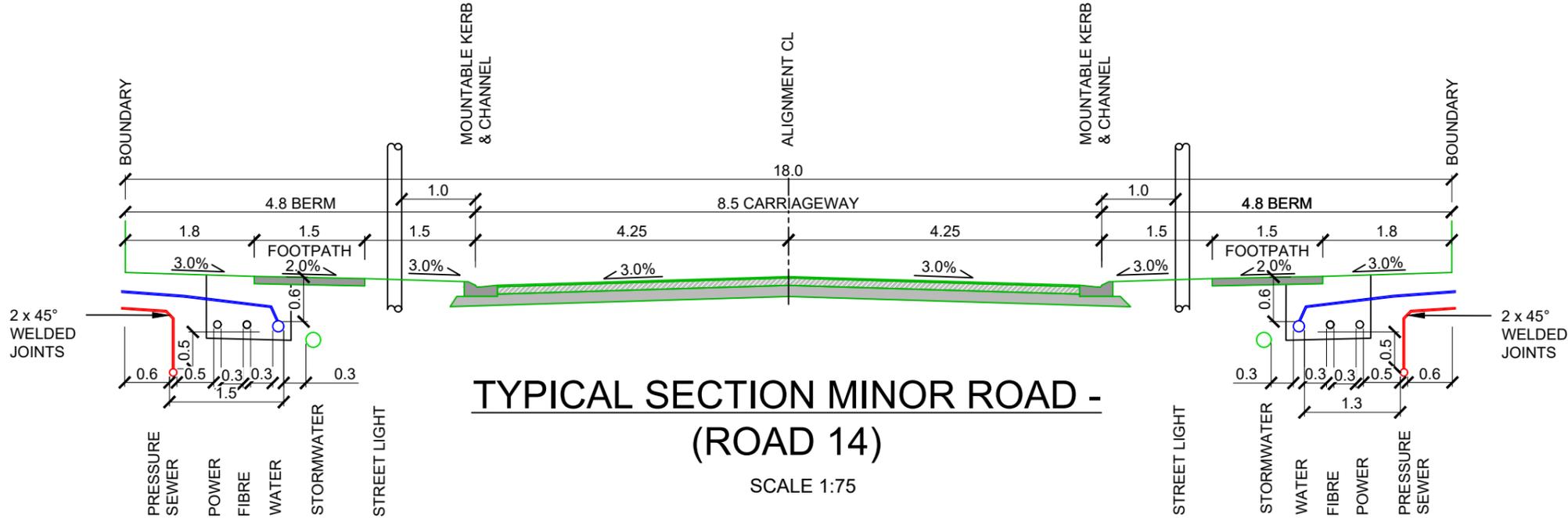
ROADING LAYOUT
SHEET 12

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD512			REVISION B

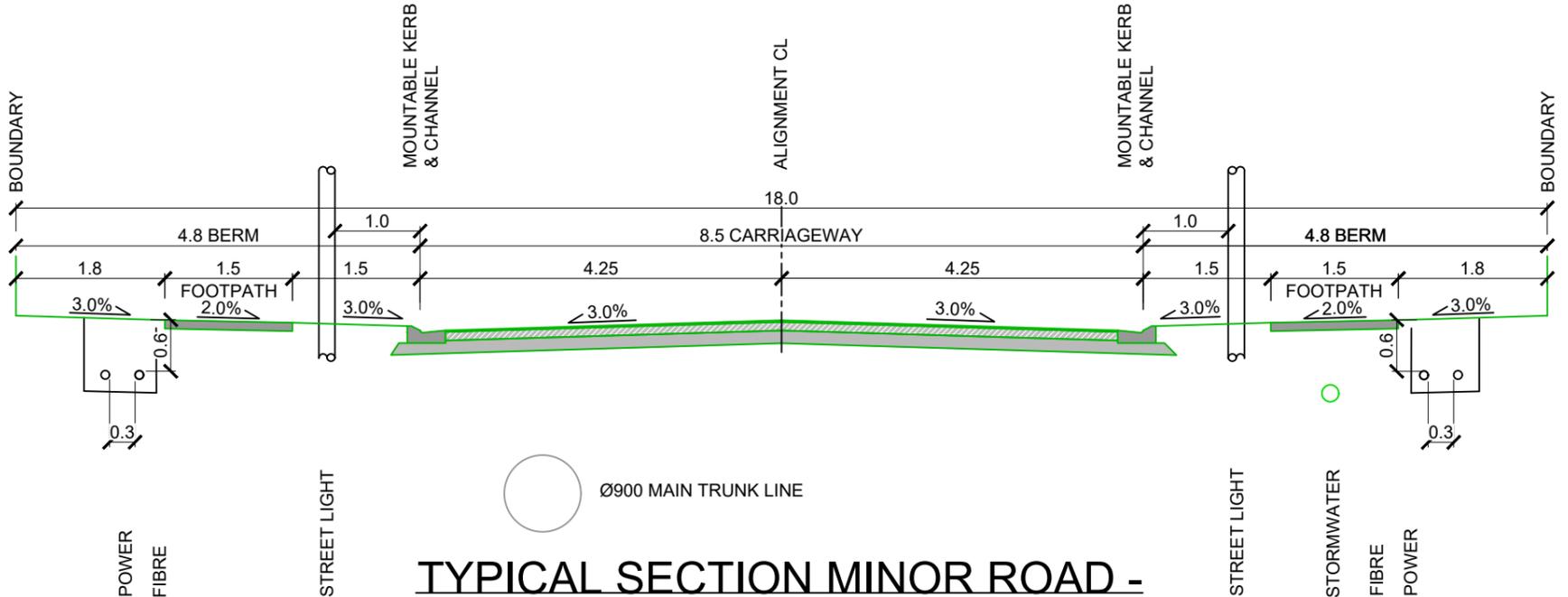
PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

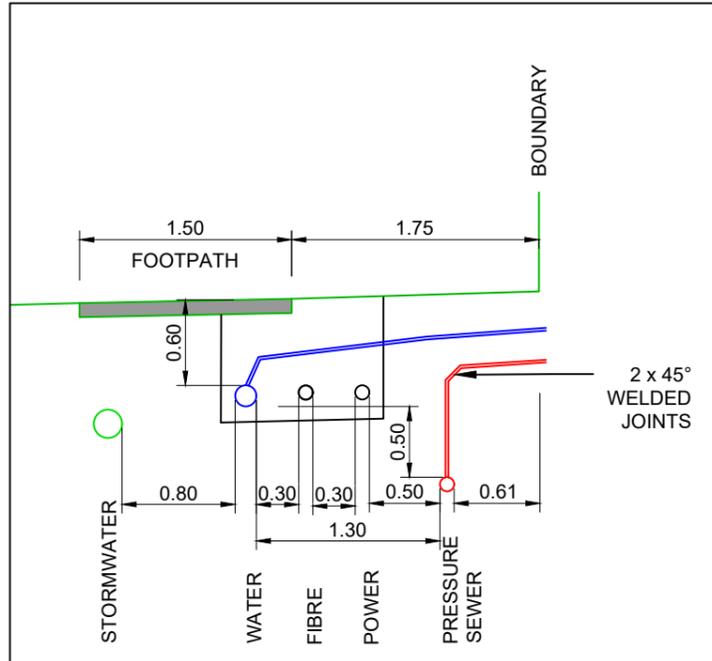
- NOTES**
- FOR CONSTRUCTION NOTES SEE SHEET DD002.
 - FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET12. FOOTPATHS ARE TO BE 100mm THICK 20MPa CONCRETE ON 50mm COMPACTED FINE GRANULAR MATERIAL ON FIRM SUBGRADE (MIN CBR OF 5) TO WIDTH AS SPECIFIED IN TYPICAL SECTIONS. WDC REQUIRES A CLEGG>12 ON 50mm COMPACTED GRANULAR MATERIAL.
 - PRAM CROSSINGS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET17.



**TYPICAL SECTION MINOR ROAD -
(ROAD 14)**
SCALE 1:75



**TYPICAL SECTION MINOR ROAD -
(ROAD 17)**
SCALE 1:75



TRENCH DETAIL
SCALE 1:50

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B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

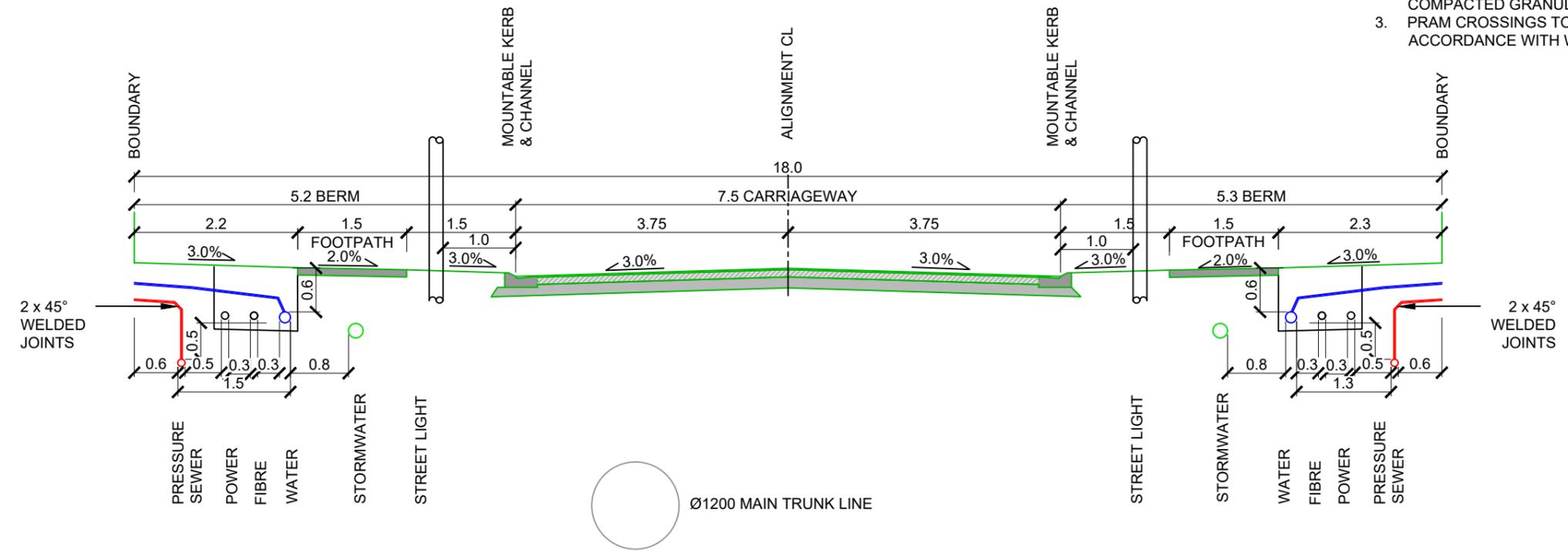
ROADING TYPICAL SECTIONS
SHEET 1

07/12/2022	K HANSARD	R BROOKES	P COOK
14333-009		1:75 @ A3	FOR APPROVAL
DD520			B

PHILIP COOK
WDC IQP#014

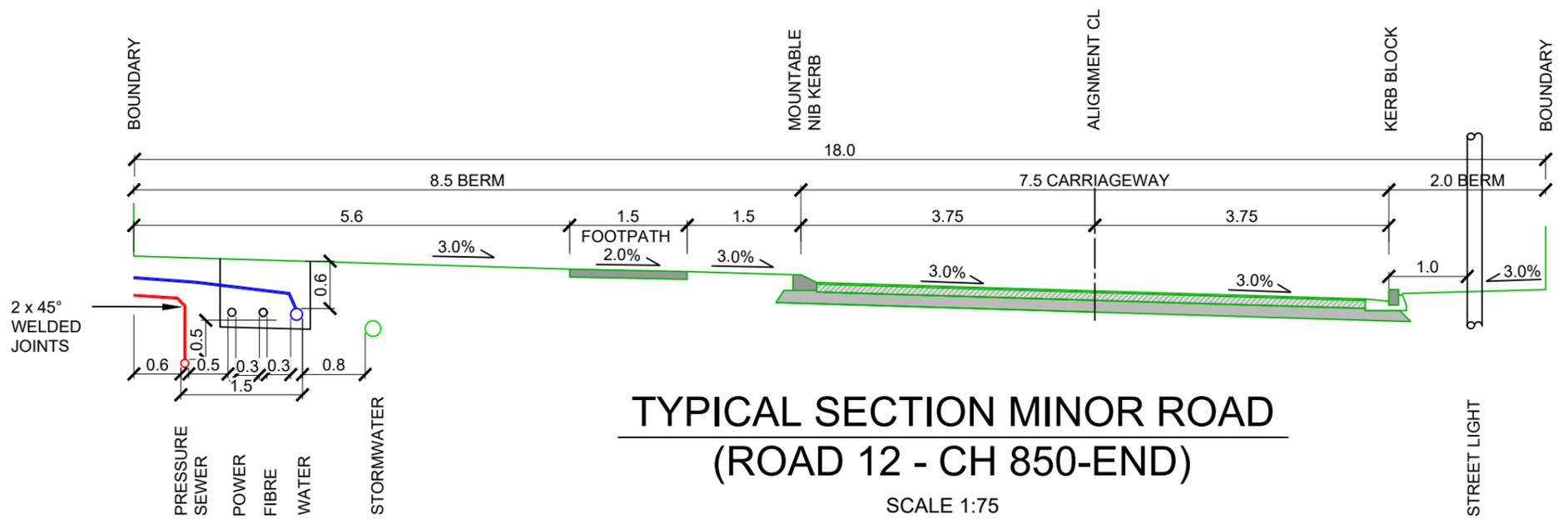
IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

- NOTES**
- FOR CONSTRUCTION NOTES SEE SHEET DD002.
 - FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET12. FOOTPATHS ARE TO BE 100mm THICK 20MPa CONCRETE ON 50mm COMPACTED FINE GRANULAR MATERIAL ON FIRM SUBGRADE (MIN CBR OF 5) TO WIDTH AS SPECIFIED IN TYPICAL SECTIONS. WDC REQUIRES A CLEGG>12 ON 50mm COMPACTED GRANULAR MATERIAL.
 - PRAM CROSSINGS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET17.



**TYPICAL SECTION MINOR ROAD -
(ROAD 12 CH600-850)**

SCALE 1:75



**TYPICAL SECTION MINOR ROAD
(ROAD 12 - CH 850-END)**

SCALE 1:75

SCALE 1:75

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C			
B	PLAN SET UPDATED	17-03-23	
		KH	PC
A	1st ISSUE	07-12-22	
		KH	PC

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

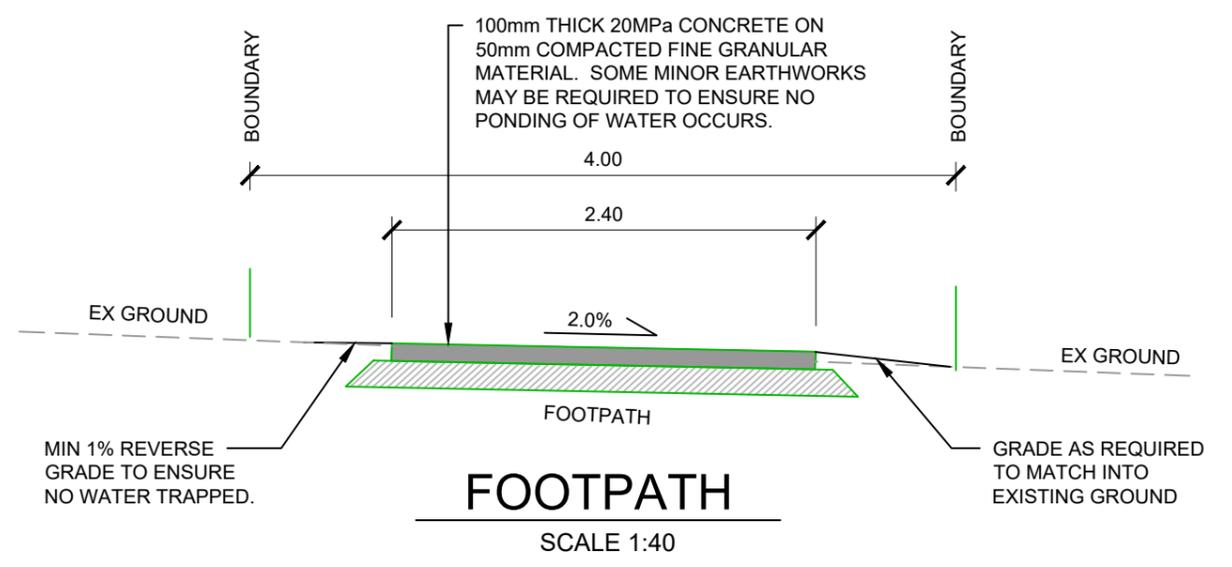
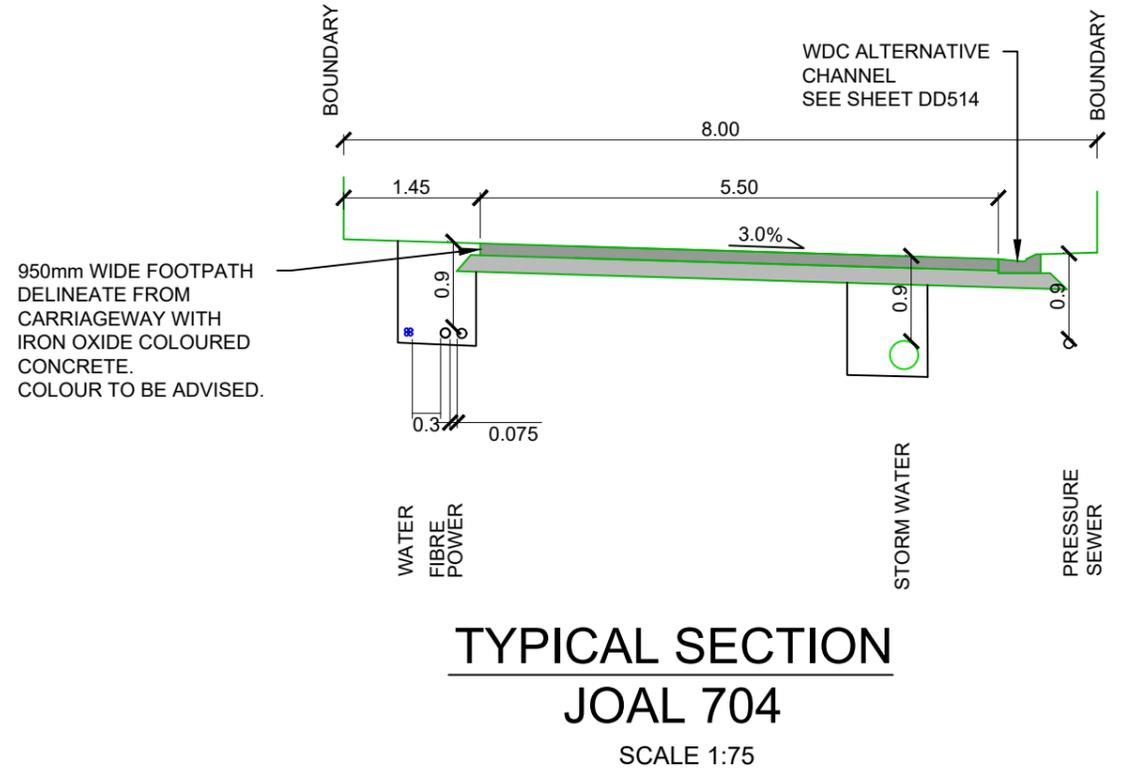
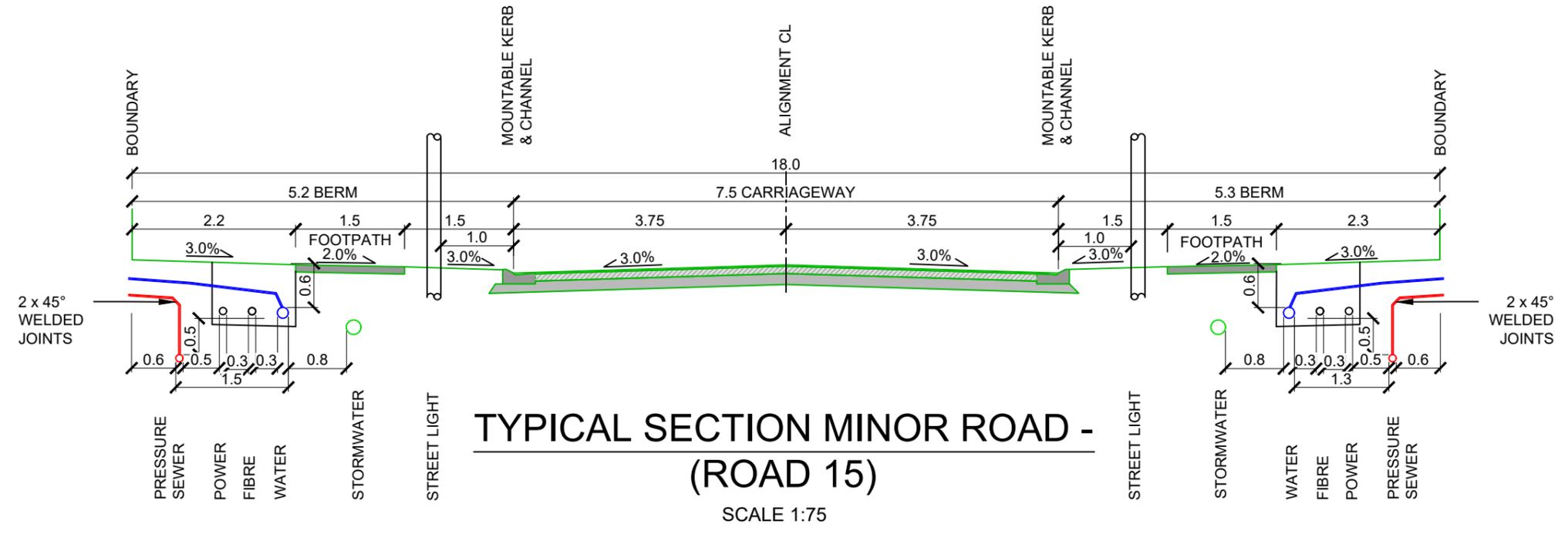
ROADING TYPICAL SECTIONS
SHEET 2

07/12/2022	K HANSARD	R BROOKES	P COOK
14333-009	1:75 @ A3		FOR APPROVAL
DD521	B		

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

- NOTES**
- FOR CONSTRUCTION NOTES SEE SHEET DD002.
 - FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET12. FOOTPATHS ARE TO BE 100mm THICK 20MPa CONCRETE ON 50mm COMPACTED FINE GRANULAR MATERIAL ON FIRM SUBGRADE (MIN CBR OF 5) TO WIDTH AS SPECIFIED IN TYPICAL SECTIONS. WDC REQUIRES A CLEGG>12 ON 50mm COMPACTED GRANULAR MATERIAL.
 - PRAM CROSSINGS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET17.



SCALE 1:75
3
2
1
0

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B	PLAN SET UPDATED	17-03-23	
		KH PC	
A	1st ISSUE	07-12-22	
		KH PC	

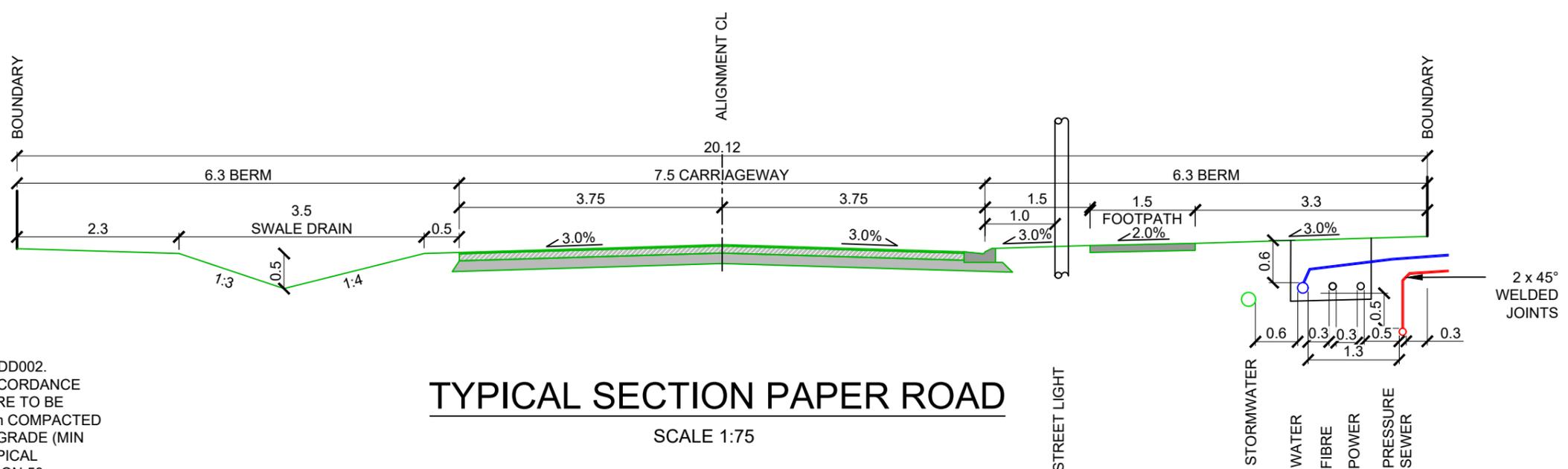
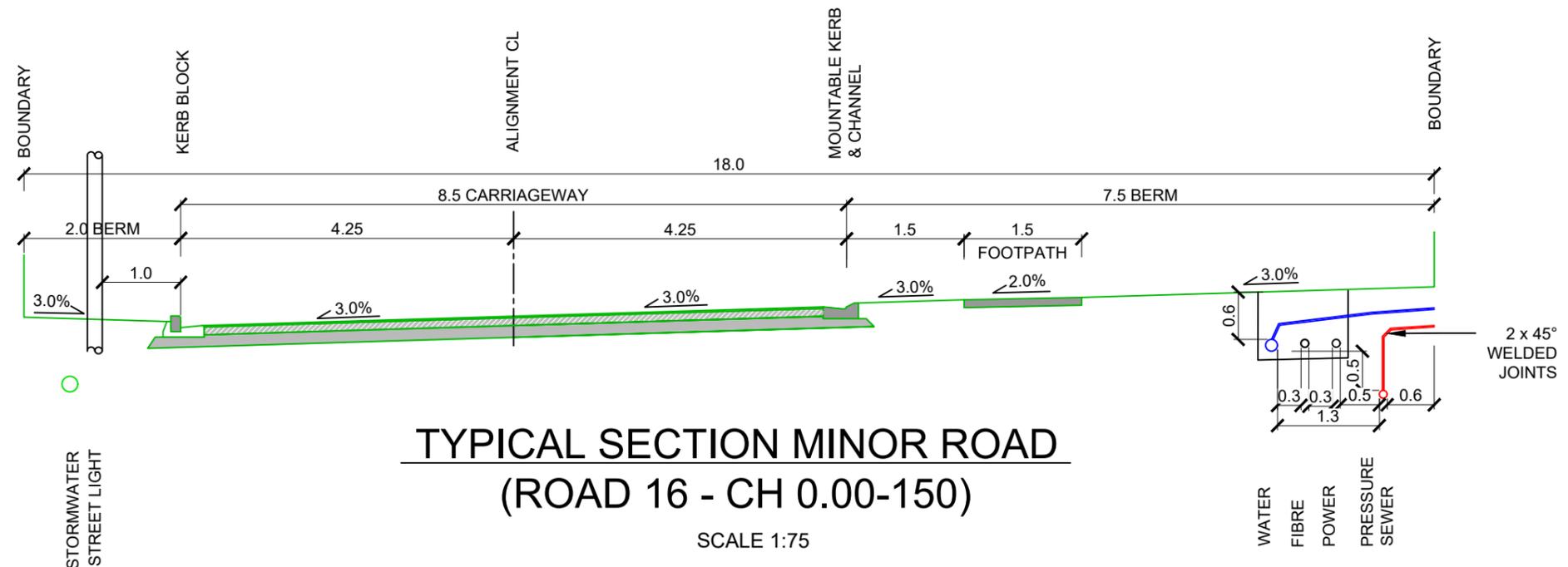
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

ROADING TYPICAL SECTIONS
SHEET 3

07/12/2022	K HANSARD	R BROOKES	P COOK
14333-009		1:75 @ A3	FOR APPROVAL
DD522			B



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



- NOTES**
- FOR CONSTRUCTION NOTES SEE SHEET DD002.
 - FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET12. FOOTPATHS ARE TO BE 100mm THICK 20MPa CONCRETE ON 50mm COMPACTED FINE GRANULAR MATERIAL ON FIRM SUBGRADE (MIN CBR OF 5) TO WIDTH AS SPECIFIED IN TYPICAL SECTIONS. WDC REQUIRES A CLEGG>12 ON 50mm COMPACTED GRANULAR MATERIAL.
 - PRAM CROSSINGS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET17.

SCALE 1:75

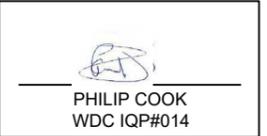


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B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	

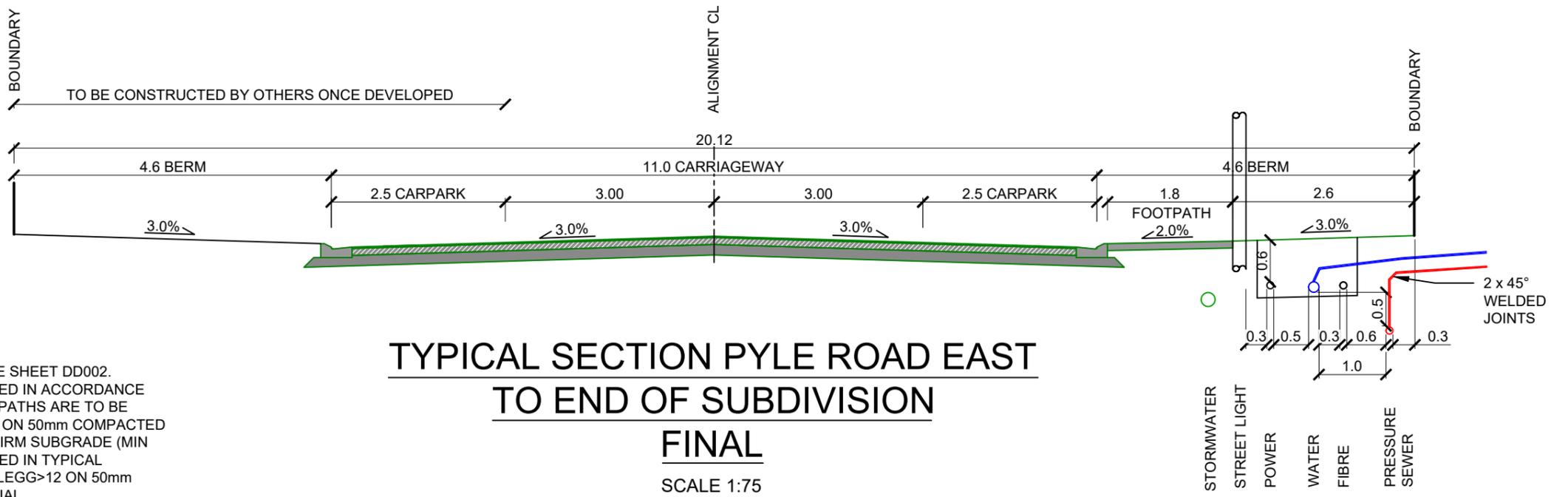
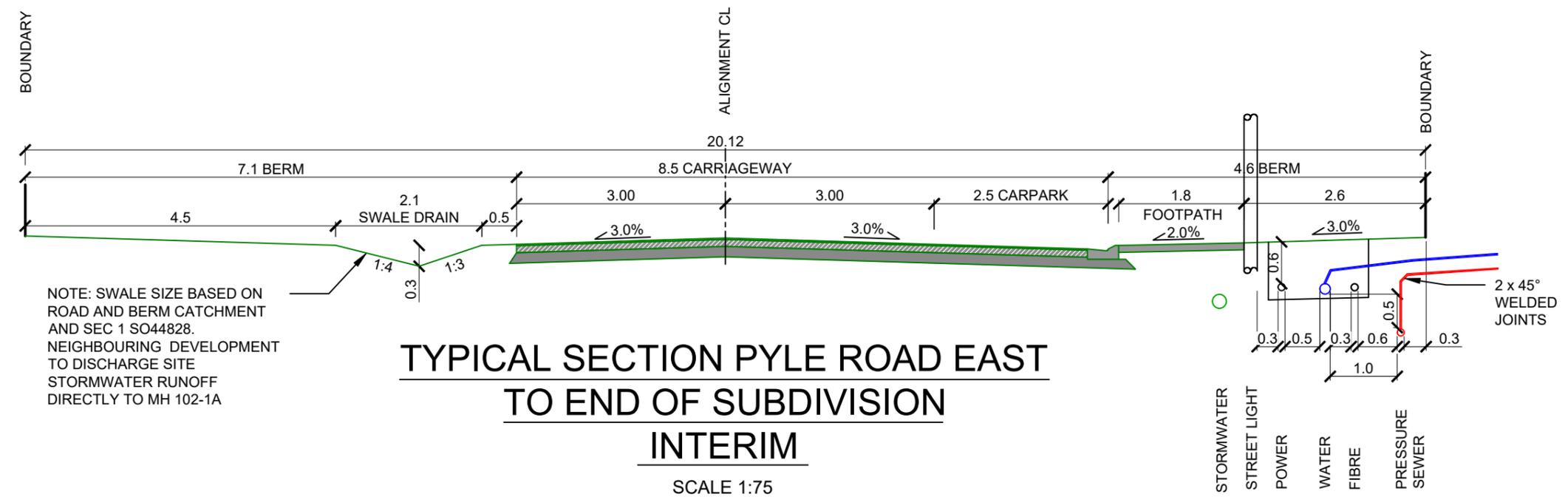
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

ROADING TYPICAL SECTIONS
SHEET 4

07/12/2022	K HANSARD	R BROOKES	P COOK
14333-009	1:75 @ A3		FOR APPROVAL
DD523	B		



IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



SCALE 1:75

- NOTES**
- FOR CONSTRUCTION NOTES SEE SHEET DD002.
 - FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET12. FOOTPATHS ARE TO BE 100mm THICK 20MPa CONCRETE ON 50mm COMPACTED FINE GRANULAR MATERIAL ON FIRM SUBGRADE (MIN CBR OF 5) TO WIDTH AS SPECIFIED IN TYPICAL SECTIONS. WDC REQUIRES A CLEGG>12 ON 50mm COMPACTED GRANULAR MATERIAL.
 - PRAM CROSSINGS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET17.



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

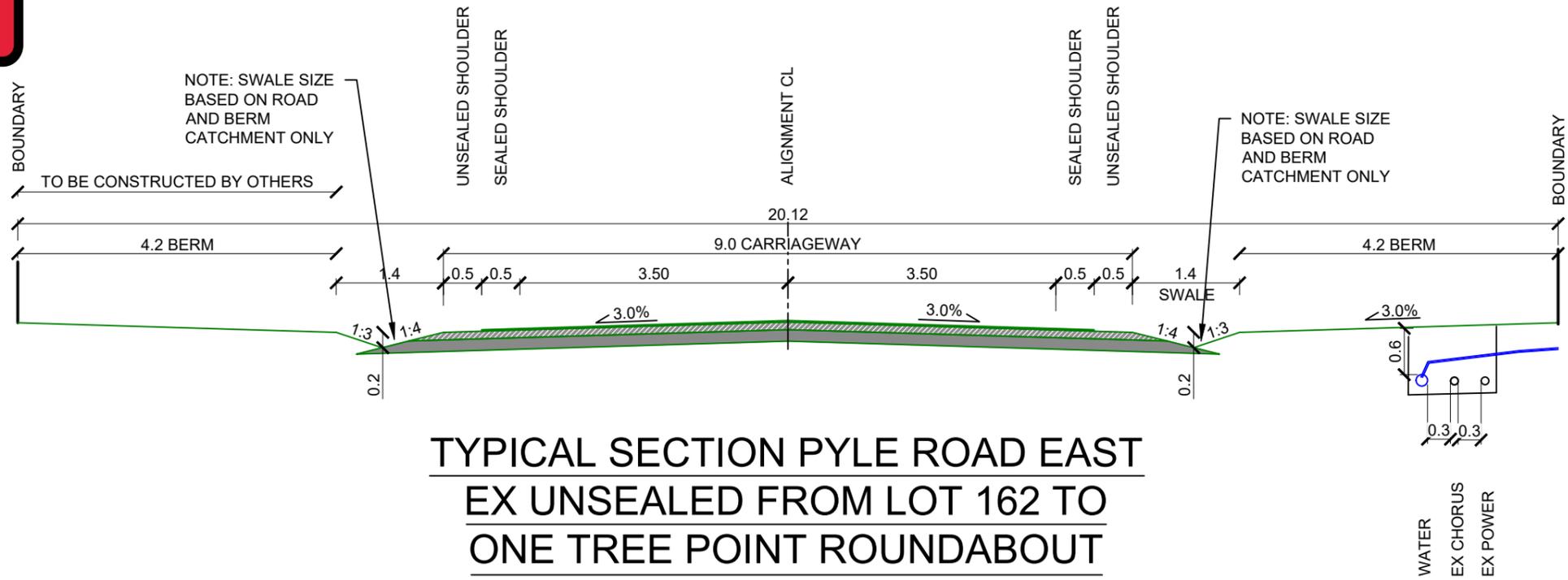
TITLE
ROADING TYPICAL SECTIONS
 SHEET 5

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:75 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD524		REVISION	B			

SCALE 1:75

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



**TYPICAL SECTION PYLE ROAD EAST
EX UNSEALED FROM LOT 162 TO
ONE TREE POINT ROUNDABOUT**

SCALE 1:75

SCALE 1:75
3
2
1
0

- NOTES**
- FOR CONSTRUCTION NOTES SEE SHEET DD002.
 - FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET12. FOOTPATHS ARE TO BE 100mm THICK 20MPa CONCRETE ON 50mm COMPACTED FINE GRANULAR MATERIAL ON FIRM SUBGRADE (MIN CBR OF 5) TO WIDTH AS SPECIFIED IN TYPICAL SECTIONS. WDC REQUIRES A CLEGG>12 ON 50mm COMPACTED GRANULAR MATERIAL.
 - PRAM CROSSINGS TO BE CONSTRUCTED IN ACCORDANCE WITH WDC EES SHEET17.

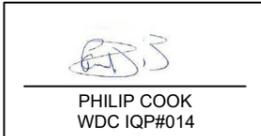


C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

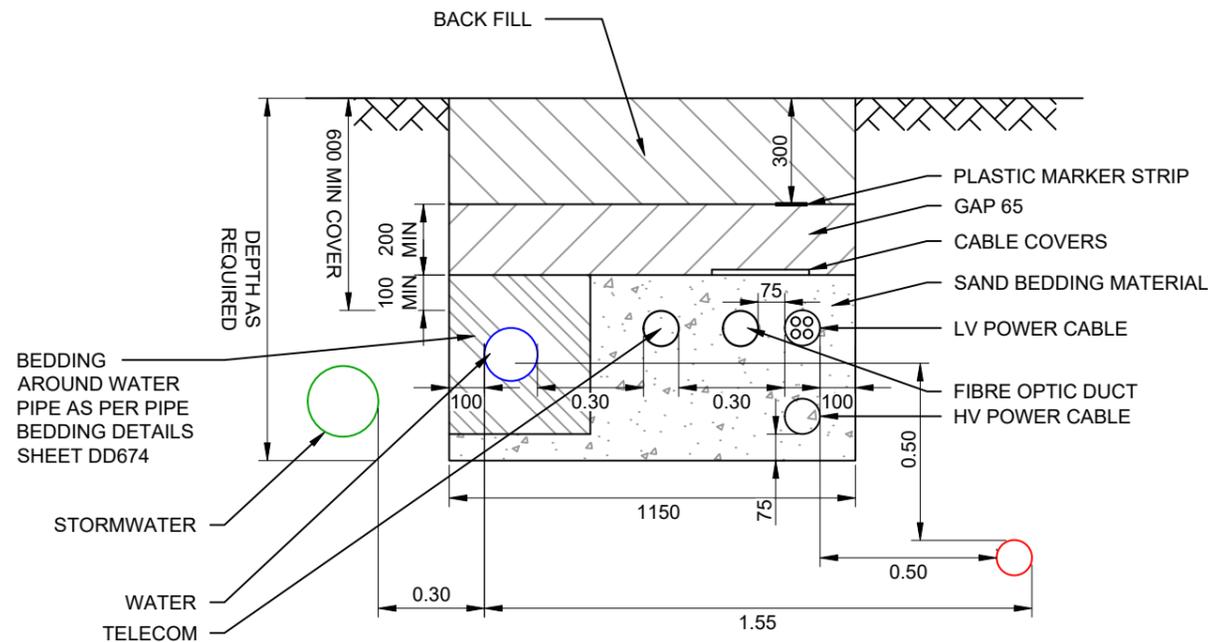
TITLE
ROADING TYPICAL SECTIONS
SHEET 6

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:75 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD525			REVISION B



IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES
 1. SEE CONSTRUCTION NOTES SHEET DD002.



THE MINIMUM CLEAR DISTANCE BETWEEN SERVICES SHALL BE THE GREATER OF THE REQUIRED CLEARANCES BETWEEN THE RELEVANT SERVICES AS FOLLOWS:

- STORMWATER: 300 H, 150 V
- WASTERWATER: 300 H, 150 V (EXCEPT WATERMAINS AS FOLLOWS)
1000 H, 500 V OR 600 H, 750 V TO WASTEWATERS AS PER TABLE 5.7.
- ELECTRICITY: 500 H, 225 V (EXCEPT WATERMAINS > 200mm ID AS FOLLOWS)
1000 H, 225 V TO WATERMAINS > 200mm ID.
- TELECOM & GAS: 300 H, 150 V (EXCEPT WATERMAINS > 200mm ID AS FOLLOWS)
600 H, 150 V TO WATERMAINS > 200mm ID.
- WATERMAINS: CLEARANCE TO OTHER SERVICES AS ABOVE.
CLEARANCE TO OTHER WATERMAINS AS FOLLOWS:
600 H, 500 V WHERE NEW PIPELINE IS > 375mm ID
300 H, 150 V WHERE NEW PIPELINE IS ≤200mm ID
AND WHERE EXISTING PIPELINE IS ≤375mm ID
600 H, 150 V WHERE NEW PIPELINE IS > 200mm ID
AND WHERE EXISTING PIPELINE IS < 375mm ID

- NOTES:**
1. ALL DISTANCES IN MM.
 2. ALL SERVICES SHALL HAVE 600mm MIN. COVER UNDER FOOTPATHS AND BERMS.
 3. REFER TO TABLE 5.7 (WASTEWATER) AND 6.4 (WATER) FOR FURTHER NOTES.
 4. VERTICAL CLEARANCES APPLY WHERE SERVICES CROSS, EXCEPT THAT WATERMAINS SHALL ALWAYS MAINTAIN A CLEARANCE ABOVE A PARALLEL WASTEWATER PIPELINE.

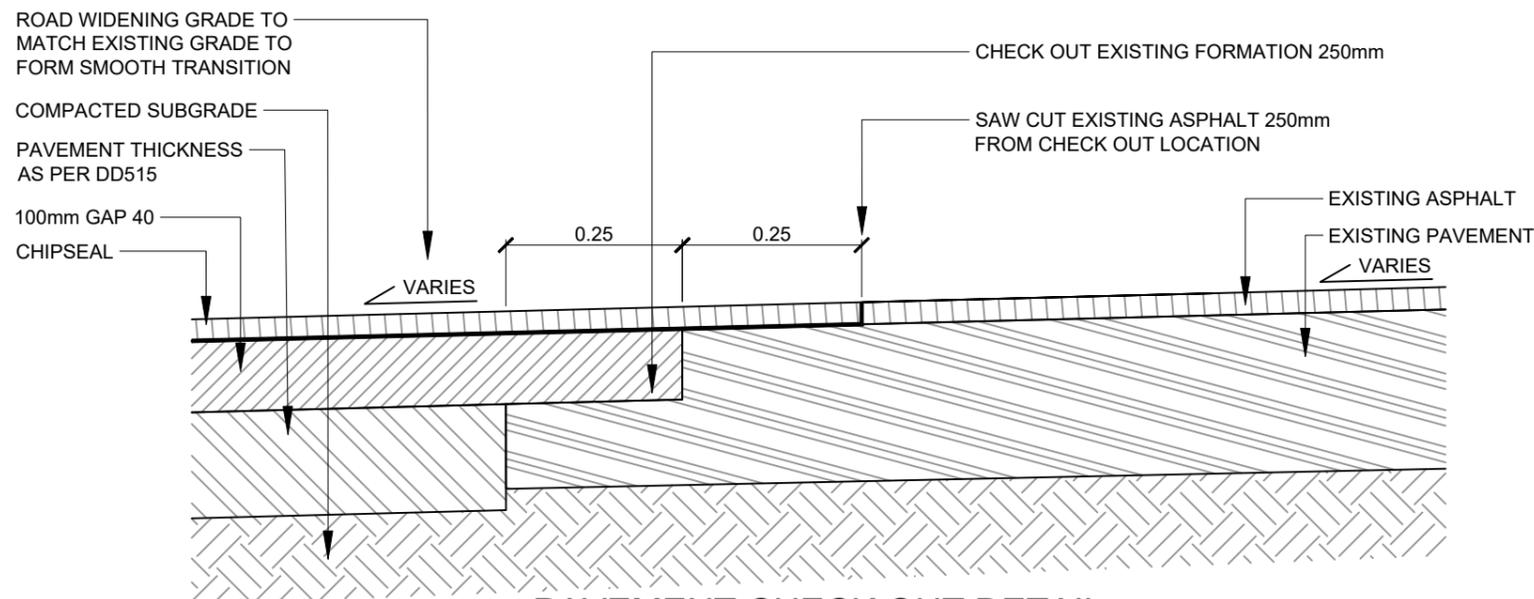
MINIMUM CLEARANCES BETWEEN SERVICES

FOR LIVING 1 AND 2 AND ALL BUSINESS ENVIRONMENTS
 WDC EES 2010 SHEET 30

- NOTES:**
1. BEDDING MATERIAL EITHER SAND OR 'CLEAN' SOIL. THERMAL BACKFILL TO BE USED WHERE SPECIFIED
 2. COVERS TO COMPLY WITH AS/NZS 3000:2000 3.11.3.3 AND AS4705-2000 AND SHALL BE LOCATED 75mm ABOVE CABLES AND DUCTS. CABLE COVERS SHALL BE AT LEAST 150mm IN WIDTH AND OVERLAP AT LEAST 40mm EACH SIDE OF THE CABLE.
 3. BACKFILL, GENERALLY USE FILL FROM TRENCH BUT ENSURE NO LARGE STONES OR SHARP OBJECTS ARE PLACED BACK IN THE TRENCH.
 4. MARKER STRIP TO COMPLY WITH AS/NZS 3000:2000 3.11.3.4 AND BE 100mm WIDE, COLOURED ORANGE, WITH THE WORDS 'ELECTRICAL CABLE BELOW'.
 5. WHERE PRACTICAL PROVIDE SOME SEPARATION (75mm OR GREATER) BETWEEN DIRECT LAID LV AND SL CABLE / FIBRE OPTIC DUCT.
 6. WHERE NECESSARY PE WATER PIPES MAY BE LOCALLY DISPLACED TO ENSURE 0.3m HORIZONTAL SEPARATION AROUND STORMWATER MANHOLES.

DIRECTLY LAID LV CABLES

NORTHPOWER SHEET 2F250s7



PAVEMENT CHECK OUT DETAIL

NOT TO SCALE

SCALE 1:20



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS	WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA
-----------------	--

TITLE	COMBINED SERVICE TRENCH AND PAVEMENT CHECK OUT DETAILS
-------	--

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:20 @ A3	STATUS		FOR APPROVAL	
DWG NUMBER	DD526	REVISION		B			

SCALE 1:20

DATE PLOTTED: Thursday, March 16, 2023 05:26:42 FILE PATH: c:\12dS\temp\12dSynergy\12dSynergyServerService\2816\74688521-363f-4185-b254-c7aee262af2e\14333-009-DD520_529 Road Typ Sec.dwg

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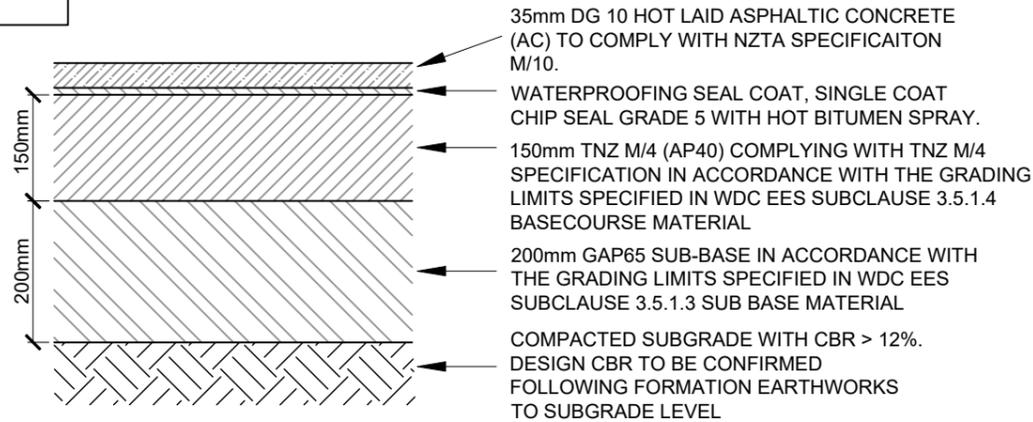


PHILIP COOK
WDC IQP#014

NOTES

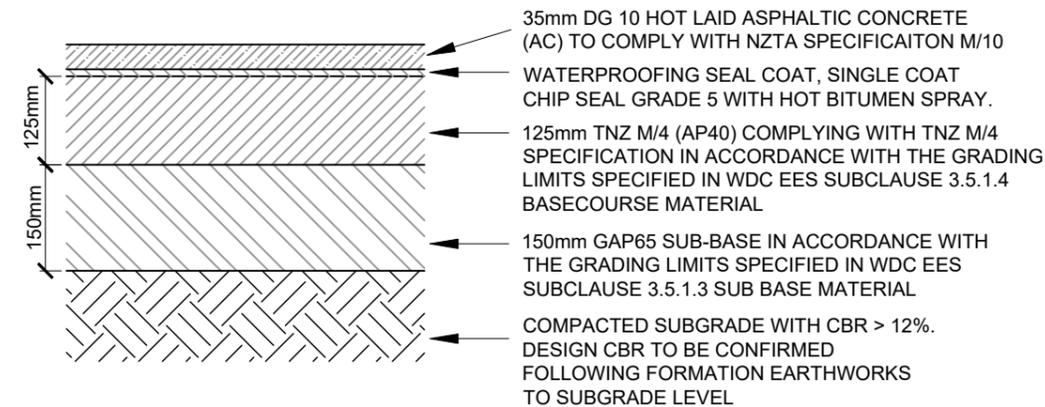
- SEE CONSTRUCTION NOTES SHEET DD002.
- CLEGG >15 REQUIRED UNDER ALL KERBS BY WDC.

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



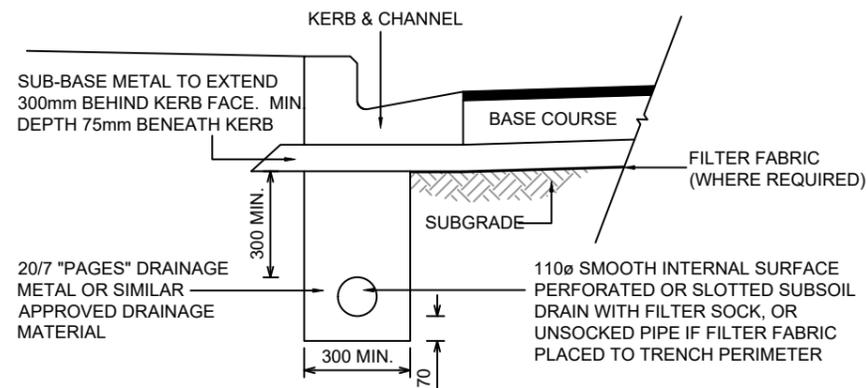
PAVEMENT DETAILS FOR MAJOR ROAD 10

SCALE 1:10



PAVEMENT DETAILS FOR MINOR ROADS 12 & 14 - 17

SCALE 1:10



UNDER KERB DRAINAGE

NOT TO SCALE

PAVEMENT TESTING REQUIREMENTS

SURFACING TESTING - BENKELMAN BEAM AT 10m CENTRES (STAGGERED) IN THE WHEEL TRACK IN BOTH LANES WITH 95% MAXIMUM ALLOWABLE DEFLECTION OF 1.5mm (MINOR ROADS) AND 1.0mm (MAJOR ROADS) WITH NO VALUE EXCEEDING THE STANDARD BY MORE THAN 25%

BASECOURSE TESTING - NUCLEAR DENSOMETER IN ACCORDANCE WITH NZS4407 TEST 4.2.2 TO ACHIEVE MAXIMUM DRY DENSITY OF ≥95% MINIMUM AND ≥98% MEAN AS PER TNZ B/2.

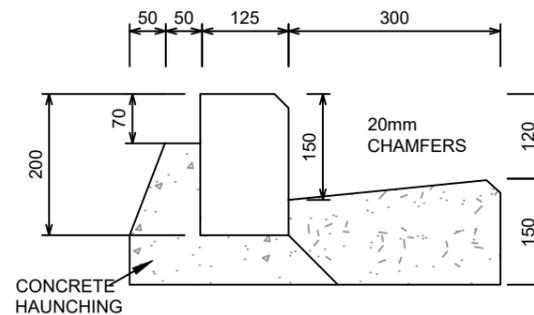
SUBBASE TESTING - NUCLEAR DENSOMETER IN ACCORDANCE WITH NZS4407 TEST 4.2.2 TO ACHIEVE MAXIMUM DRY DENSITY OF ≥92% MINIMUM AND ≥95% MEAN AS PER TNZ B/2.

SUBGRADE CBR OF 12 (FIRST 900mm DEEP) - TO ACHIEVE 23mm/BLOW WITH SCALA PENETROMETER.
PROOF ROLL OF SUBGRADE. 3m STRAIGHT EDGE OF SUBGRADE, SUBBASE AND BASECOURSE. DEGREE OF SATURATION PRIOR TO SEALING.
ALL OTHER TESTING AS REQUIRED BY THE PROJECT SPECIFICATION.



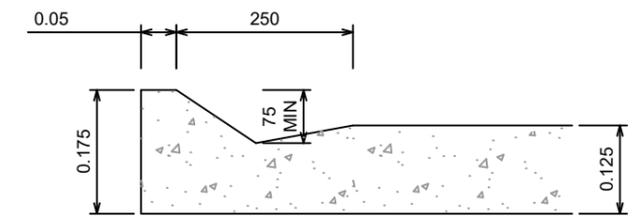
PAVEMENT DETAILS FOR JOAL

SCALE 1:20



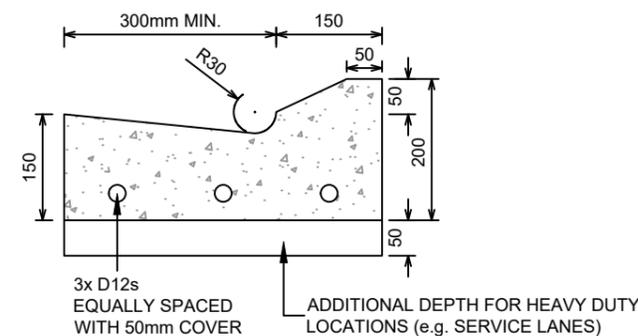
KERB BLOCK DETAIL

SHEET 13 WDC EES 2010 - NOT TO SCALE



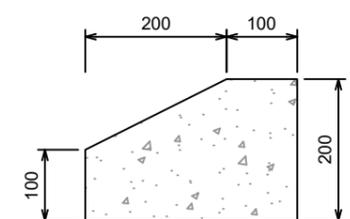
ALTERNATIVE CHANNEL

SHEET 7 WDC EES 2010 - NOT TO SCALE



MOUNTABLE KERB & CHANNEL

SHEET 13 WDC EES 2010 - NOT TO SCALE



MOUNTABLE NIB KERB DETAIL

SCALE 1:10
0.4
0.2
0



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

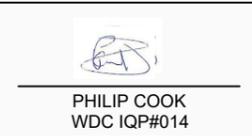
PROJECT DETAILS	WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA
-----------------	--

TITLE	PAVEMENT DETAILS
-------	------------------

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	AS SHOWN	STATUS	FOR APPROVAL		
DWG NUMBER	DD527	REVISION	B				

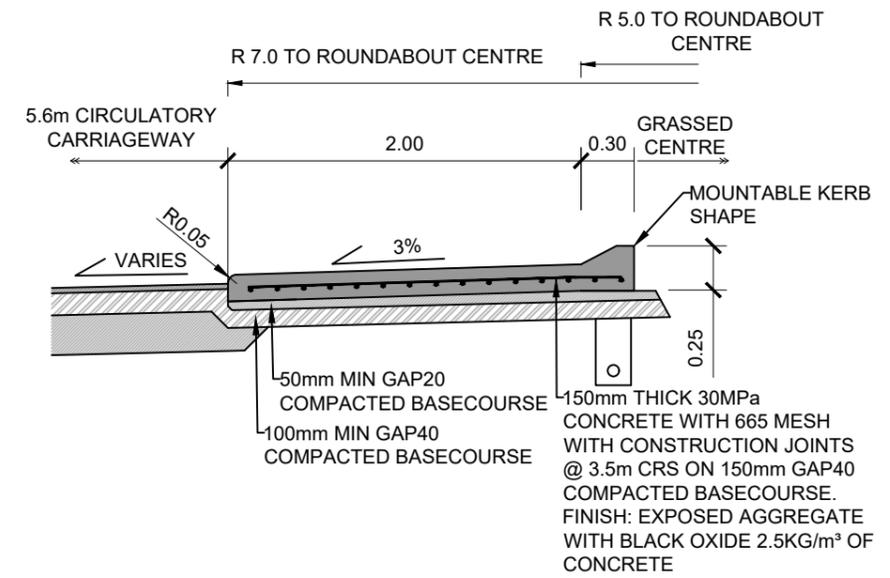
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NOTES
1. SEE CONSTRUCTION NOTES SHEET DD002.

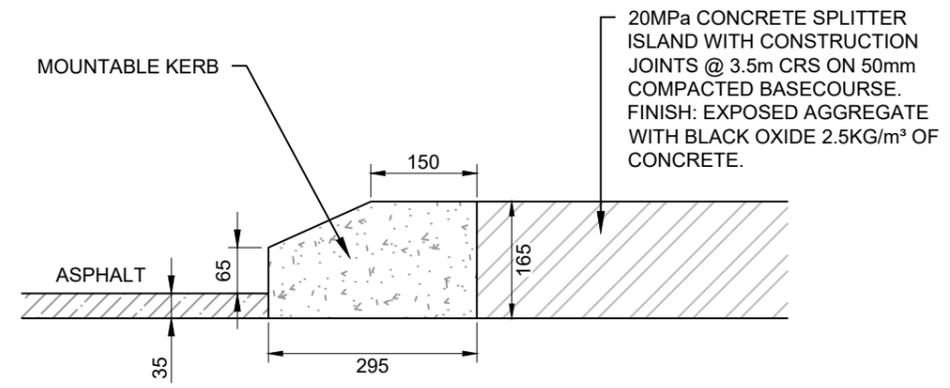


PHILIP COOK
WDC IQP#014

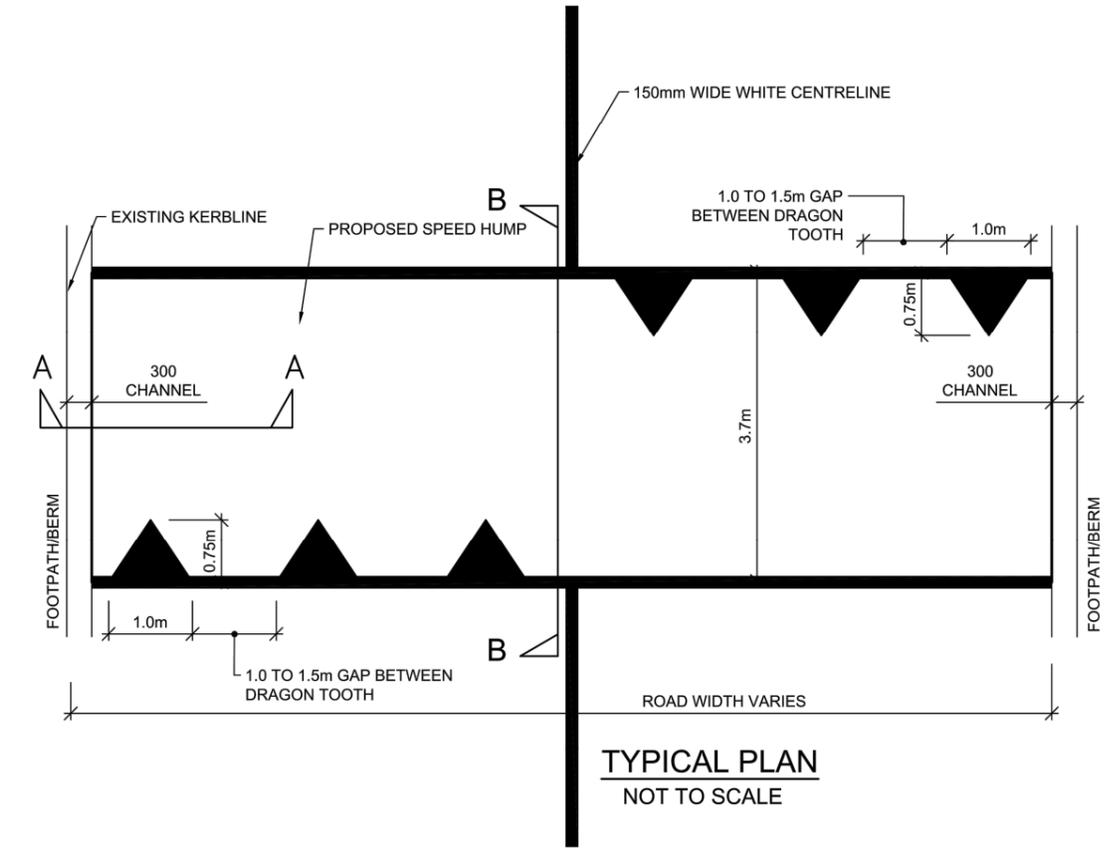
IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



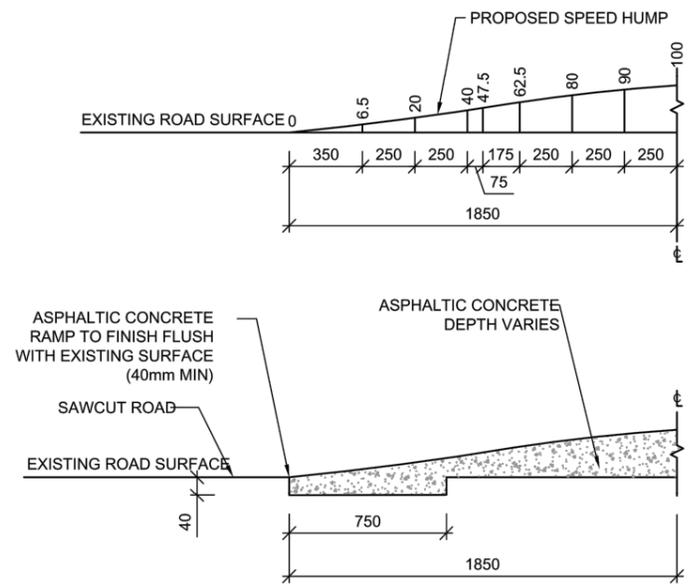
ROUNDABOUT PYLE EAST ROAD CENTRE ISLAND
SCALE 1:40



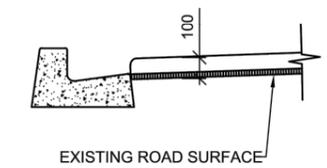
ROUNDABOUT / SPLITTER ISLAND DETAIL
SCALE 1:10



TYPICAL PLAN
NOT TO SCALE



SECTION B-B
NOT TO SCALE



SECTION A-A
NOT TO SCALE

- NOTES:
- All dimensions are in millimeters unless otherwise stated.
 - Do not scale from this drawing.
 - Contractor to liaise with local service authorities for location of all underground services before any excavation.
 - All exposed saw cut edges are to be sprayed with a hot bitumin sealer.
 - All works to have a tolerance of ±5mm

TYPICAL (SINUSOIDAL) SPEED HUMP
(AUCKLAND TRANSPORT CODE OF PRACTICE)
SHEET TC001



cook | costello
www.coco.co.nz
Whangarei | Auckland | Wellington | Christchurch

C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

ROUNDABOUT & SPEED HUMP DETAILS

07/12/2022	K HANSARD	R BROOKES	P COOK
14333-009	AS SHOWN		FOR APPROVAL
DD528	B		



PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

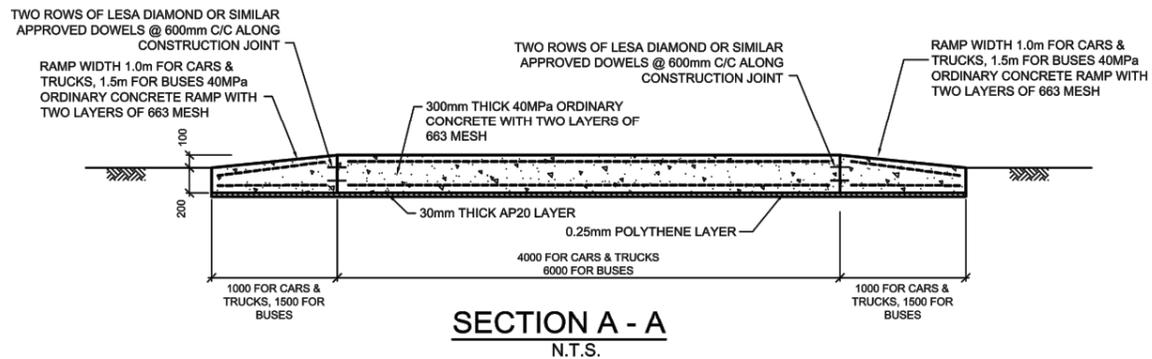
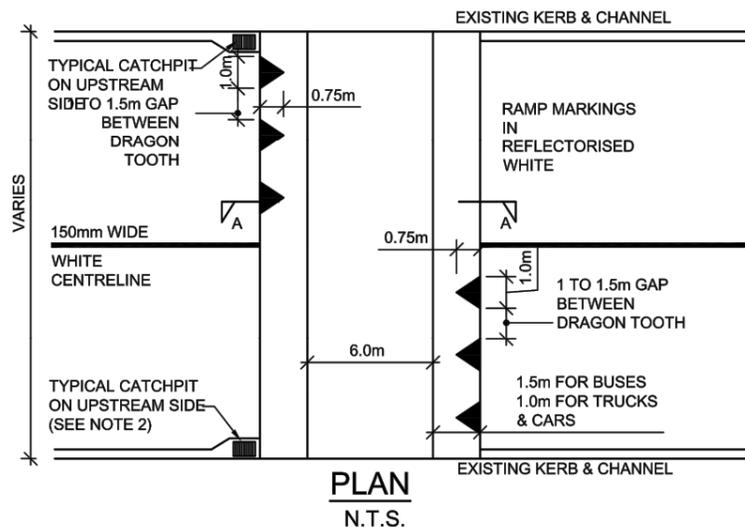
NOTES

1. SEE CONSTRUCTION NOTES SHEET DD002.

ADVANCE WARNING SIGNS ON
APPROACHING SPEED-TABLE OR
HUMPS

NOTE

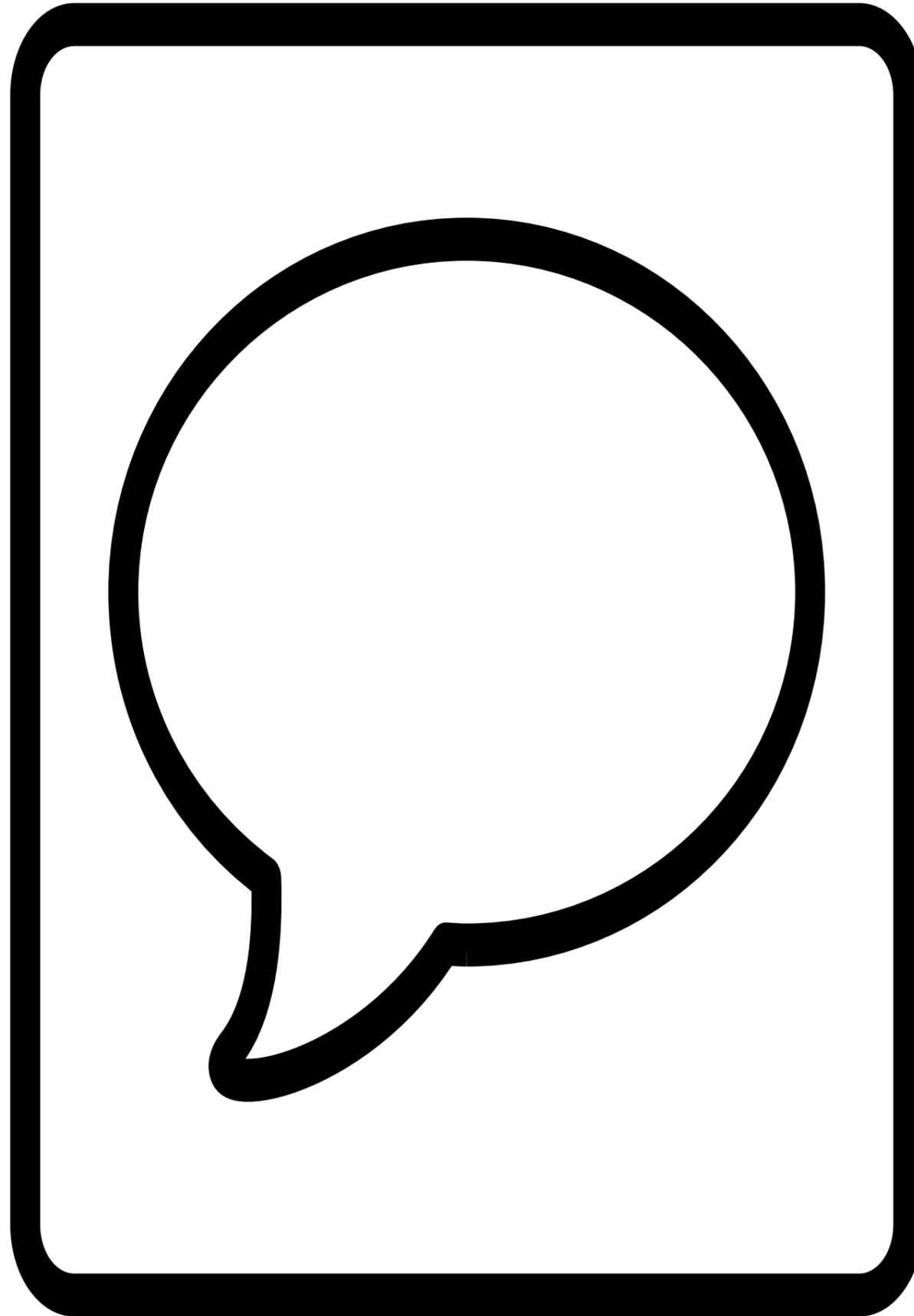
1. PW-39 sign with supplementary as shown to be erected in advance of treatment on both sides of the carriageway facing approaching traffic



NOTE

1. See drainage chapter for additional catchpit details.
2. All work to have a tolerance of ±5mm.
3. Reinforcing to be placed on spacers.

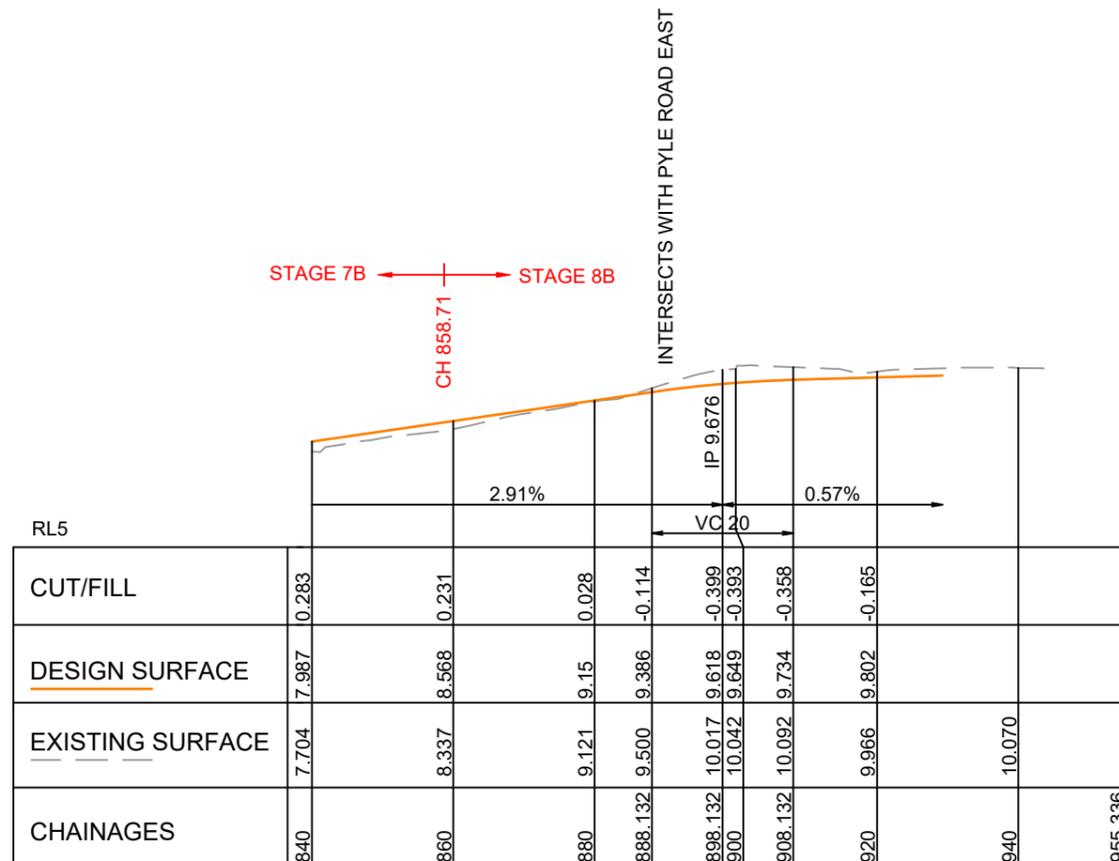
TYPICAL SPEED TABLE
CATCHPITS NOT REQUIRED AS TABLE IS LOCATED AT HIGH POINT
(AUCKLAND TRANSPORT CODE OF PRACTICE)
SHEET TC003



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC

07/12/2022	K HANSARD	R BROOKES	P COOK
14333-009	AS SHOWN		FOR APPROVAL
DD529	B		

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



HORIZ 1:1000 VERT 1:200

LONGITUDINAL SECTION - ROAD 10


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:200



C			
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A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

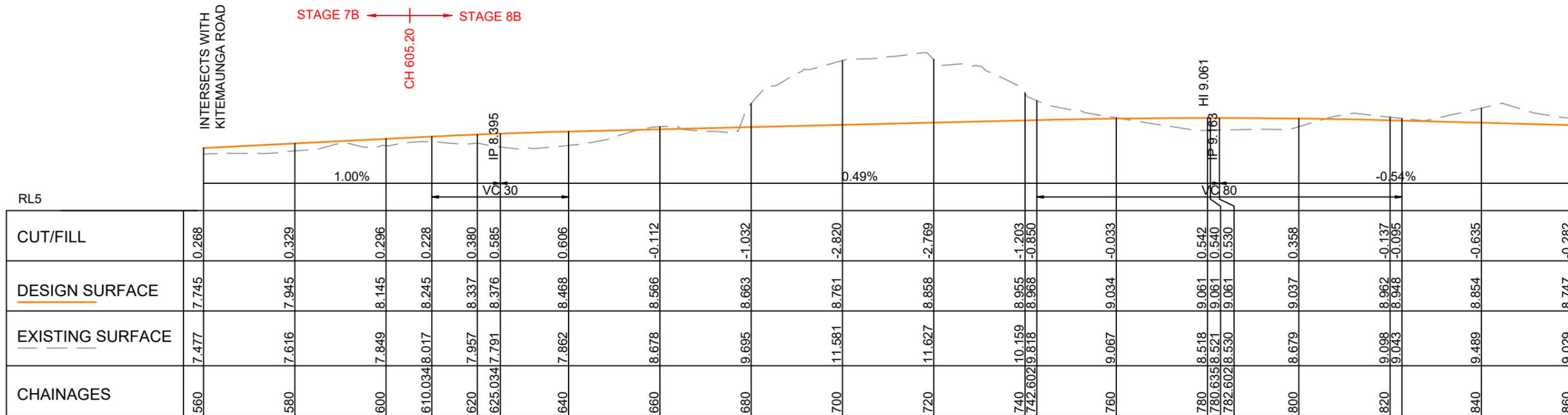
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING LONGSECTIONS
ROAD 10

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000H 1:200V	STATUS	FOR APPROVAL		
DWG NUMBER	DD530		REVISION	B			

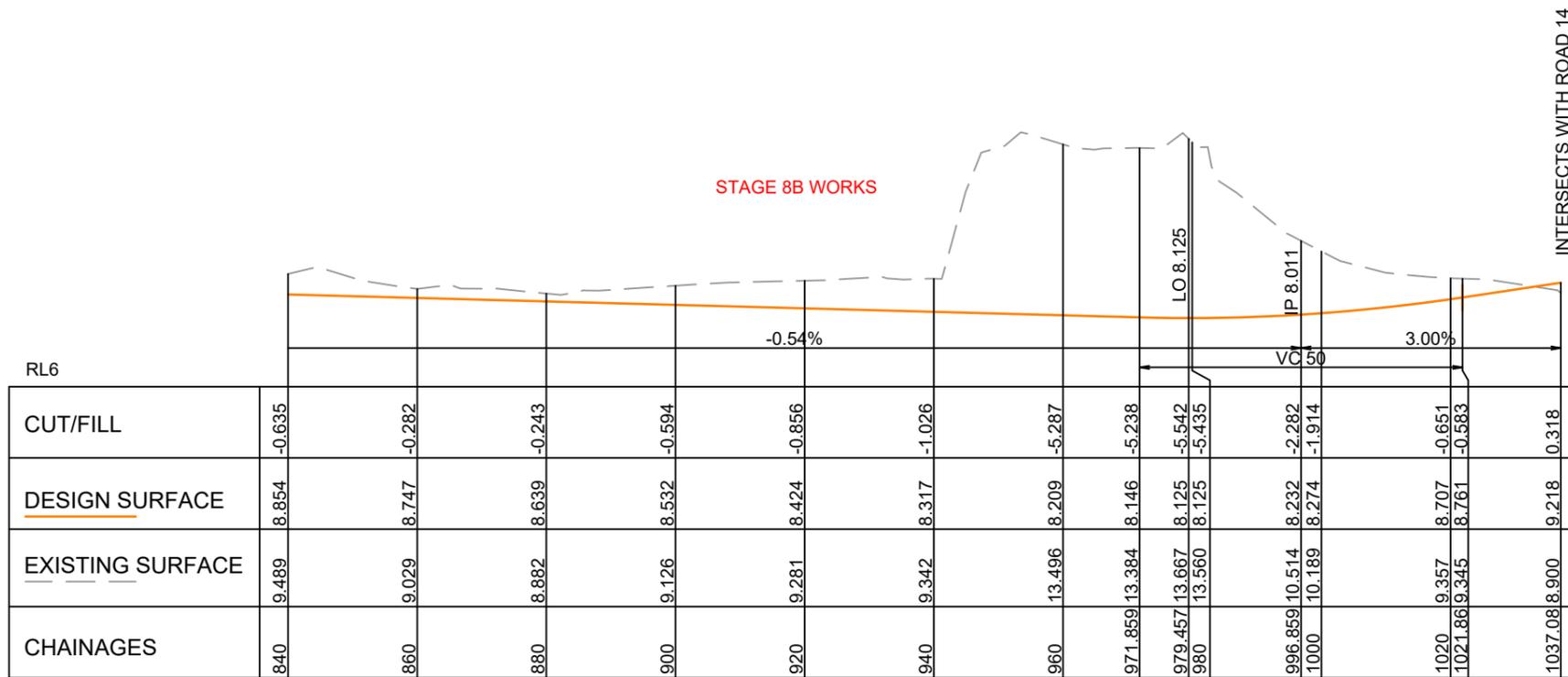
NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

SIZE
A3



HORIZ 1:1000 VERT 1:200

LONGITUDINAL SECTION - ROAD 12



HORIZ 1:1000 VERT 1:200

LONGITUDINAL SECTION - ROAD 12 CONT.




PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



REV.	REVISION DETAILS	DRAWN	APP.
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A	1st ISSUE	KH	PC

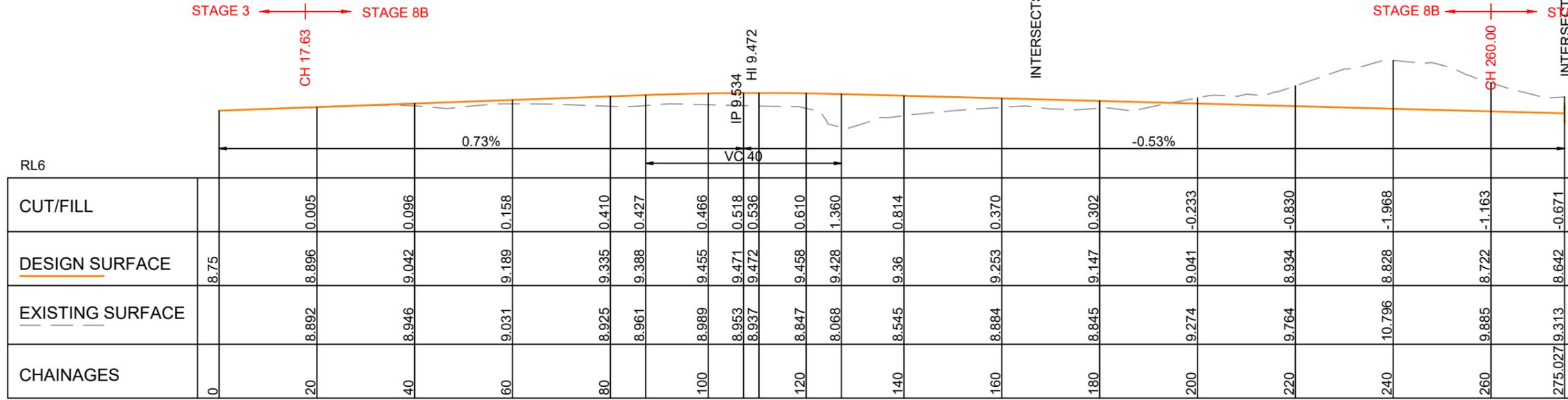
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING LONGSECTIONS
ROAD 12

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:1000H 1:200V	STATUS FOR APPROVAL	
DWG NUMBER DD531		REVISION B	

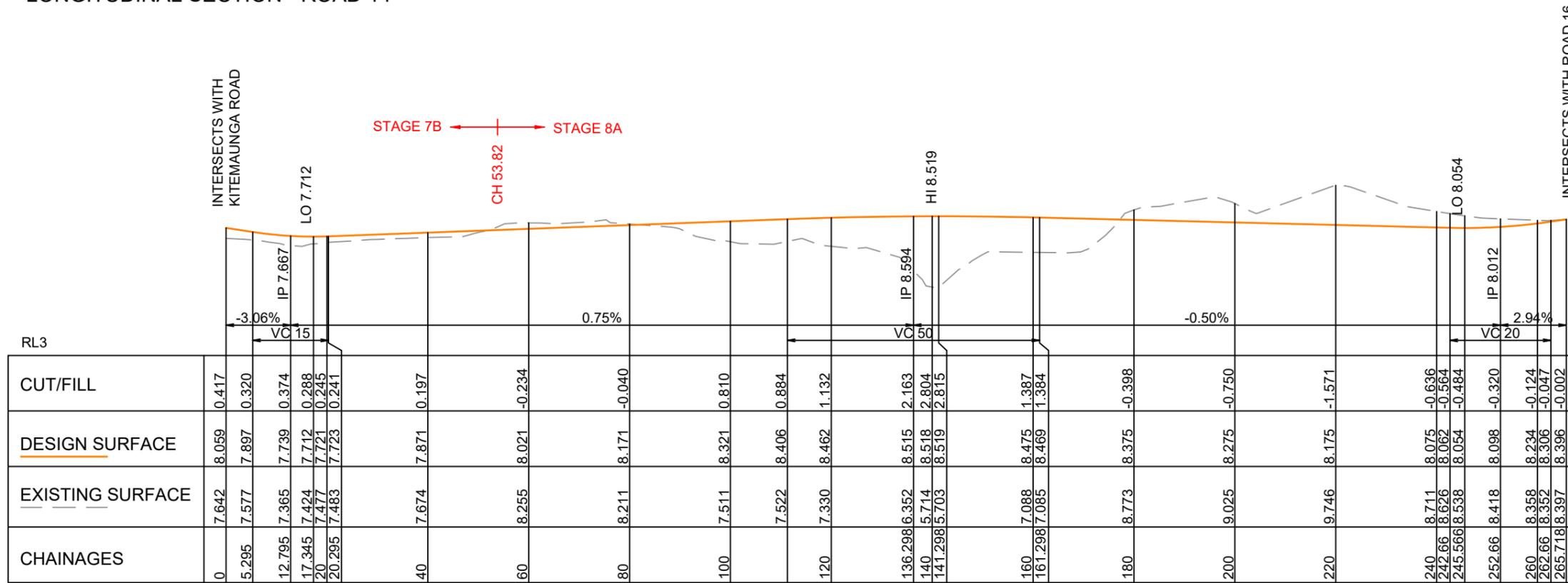
NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

SIZE
A3



HORIZ 1:1000 VERT 1:200

LONGITUDINAL SECTION - ROAD 14



HORIZ 1:1000 VERT 1:200

LONGITUDINAL SECTION - ROAD 15



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



REV.	REVISION DETAILS	DATE	DRAWN	APP.
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B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC

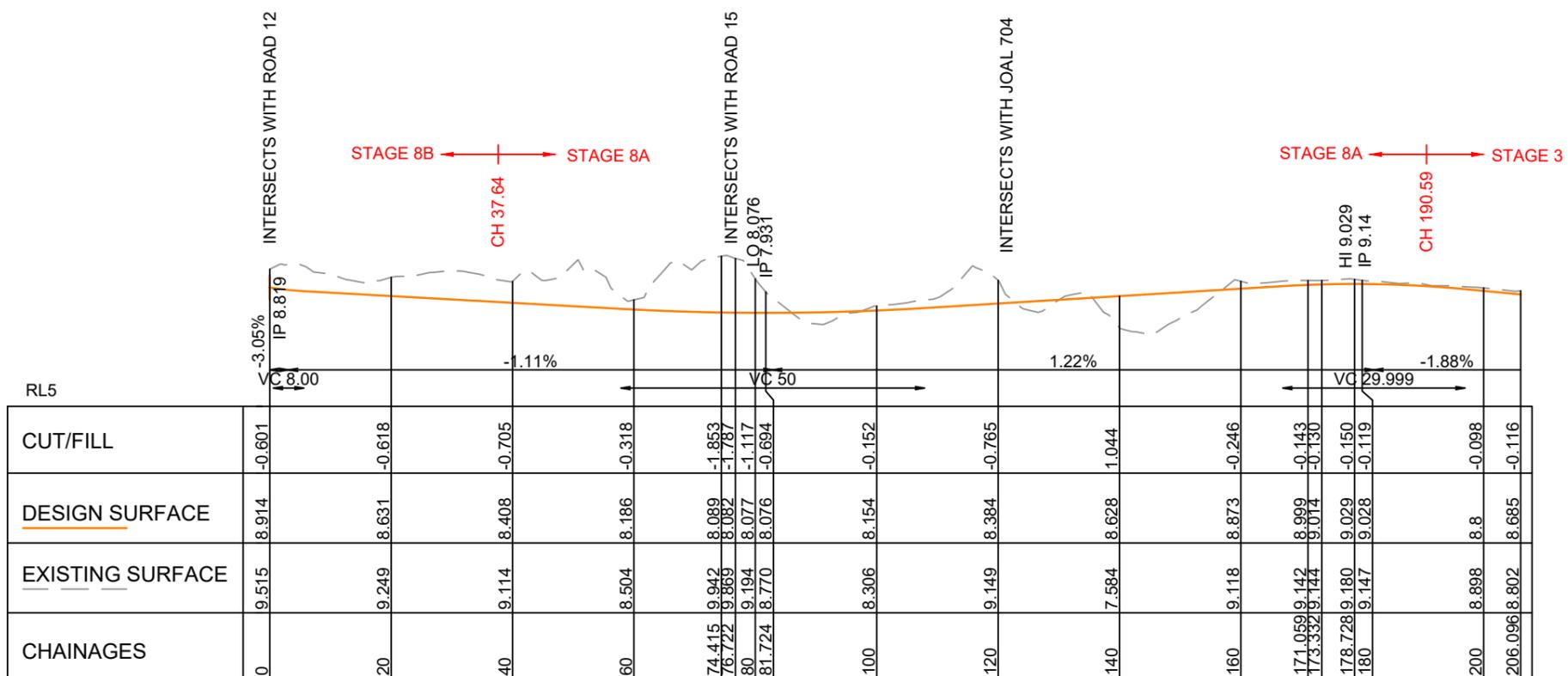
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING LONGSECTIONS
ROADS 14 & 15

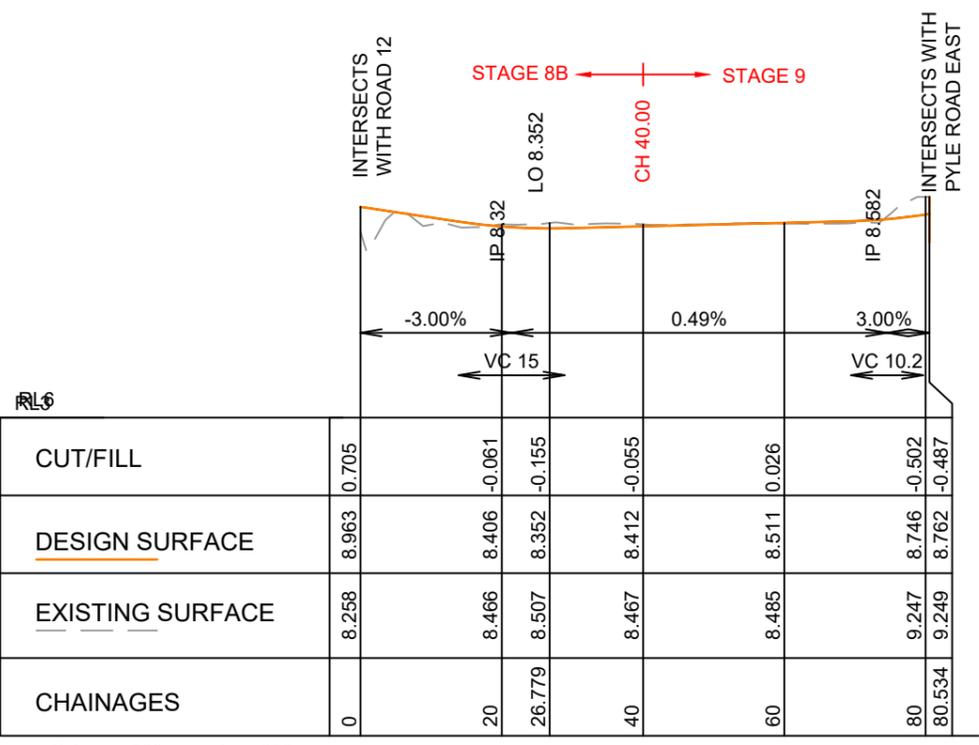
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07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:1000H 1:200V	FOR APPROVAL	
DWG NUMBER	REVISION		
DD532	B		

SCALE 1:200
SCALE 1:1000

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



HORIZ 1:1000 VERT 1:200
LONGITUDINAL SECTION - ROAD 16



HORIZ 1:1000 VERT 1:200
LONGITUDINAL SECTION - ROAD 17

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:200



REV.	REVISION DETAILS	DATE	DRAWN	APP.
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A	1st ISSUE	07-12-22	KH	PC

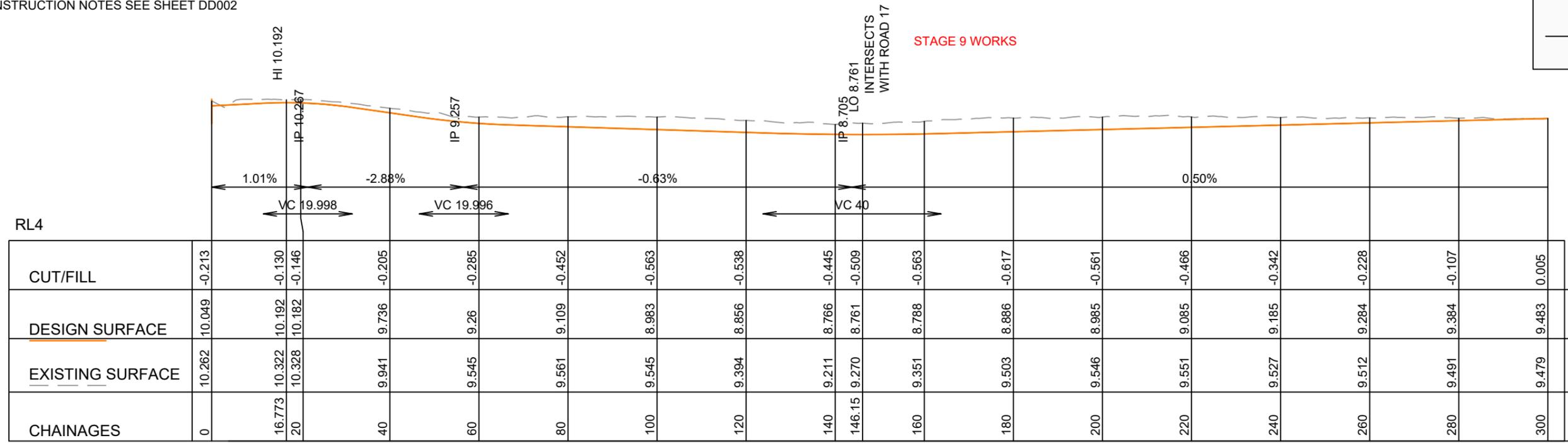
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CLIENT	WFH PROPERTIES LIMITED
PROJECT	THE LANDING - STAGES 8A, 8B & 9
LOCATION	ONE TREE POINT RUAKAKA

TITLE	
ROADS	ROADING LONGSECTIONS
ROADS	ROADS 16 & 17

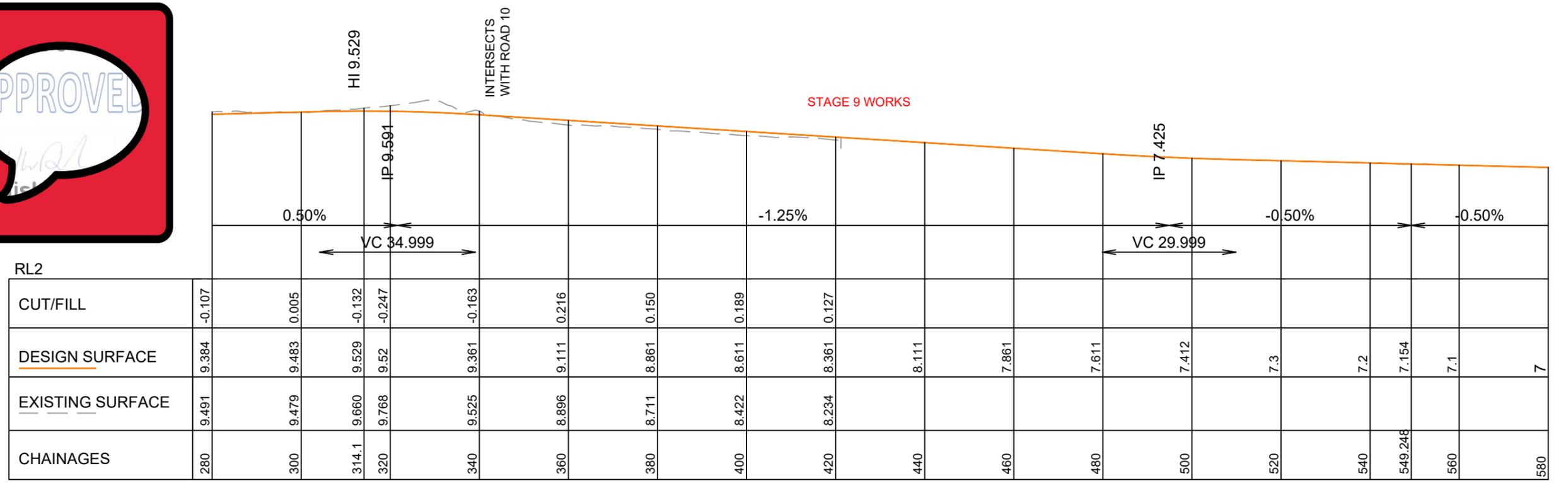
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DWG NUMBER	DD533	REVISION	B				

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

PHILIP COOK
CPEng#203738



HORIZ 1:1000 VERT 1:200
LONGITUDINAL SECTION - PYLE ROAD EAST



HORIZ 1:1000
LONGITUDINAL SECTION - PYLE ROAD EAST CONT.

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS		DRAWN APP.

PROJECT DETAILS	WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA
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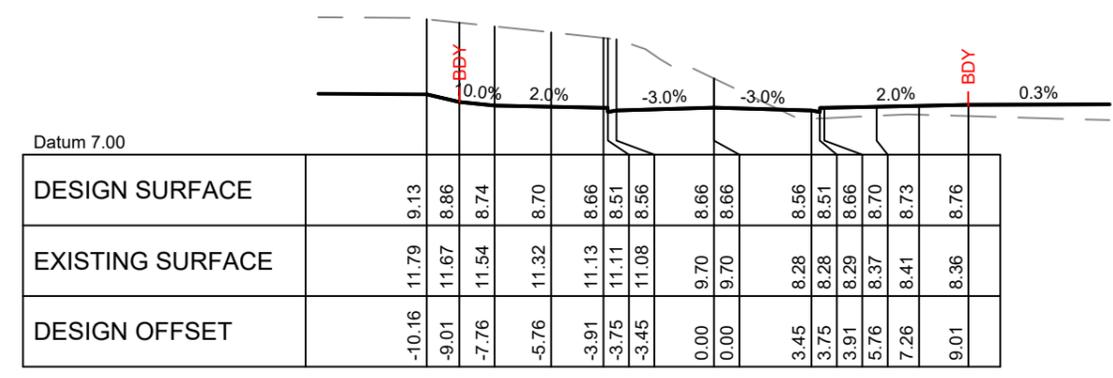
TITLE	ROADING LONGSECTIONS PYLE ROAD EAST & PAPER ROAD
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DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000H 1:200V	STATUS	FOR APPROVAL		
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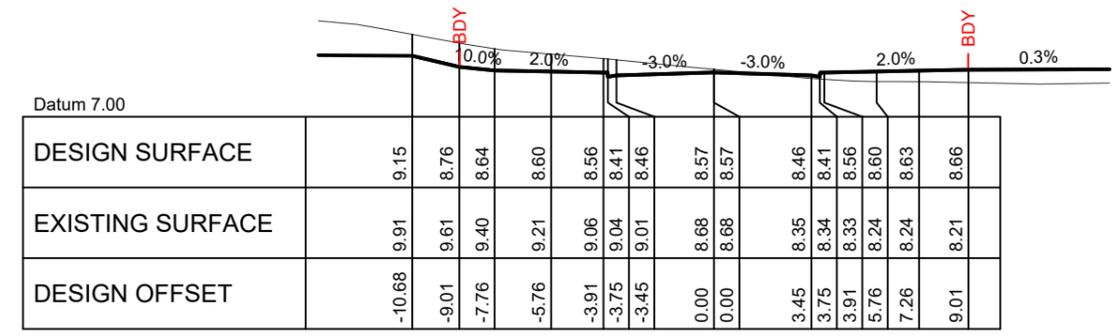
10
8
6
4
2
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SCALE 1:200

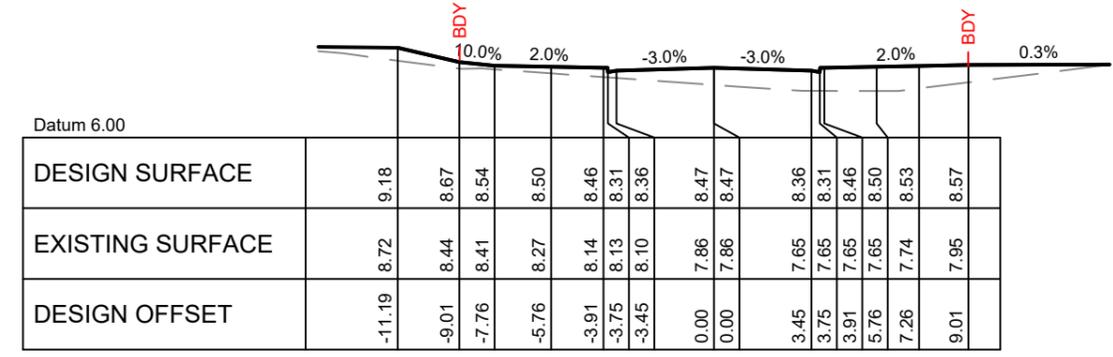
NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



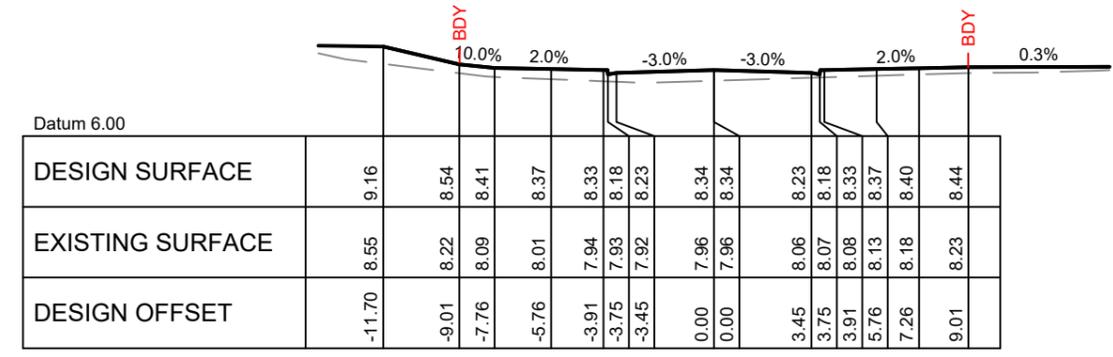
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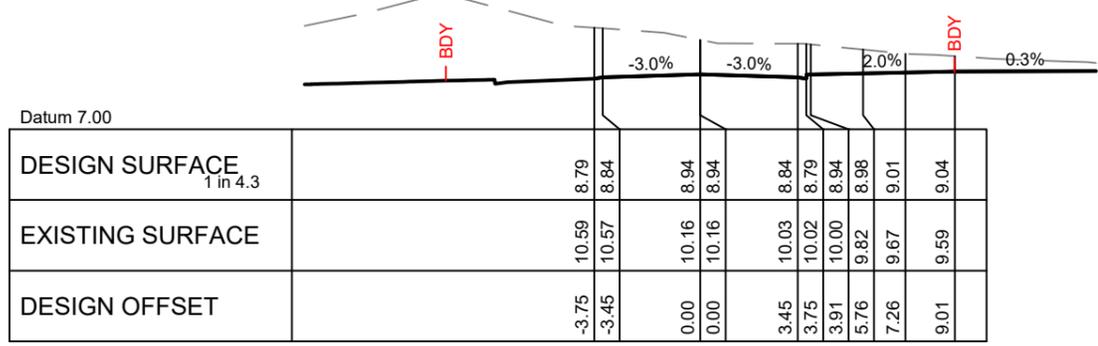
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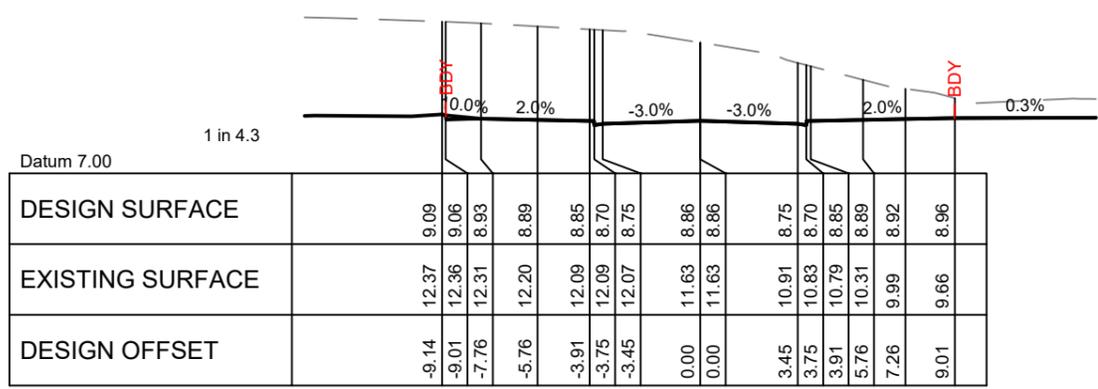
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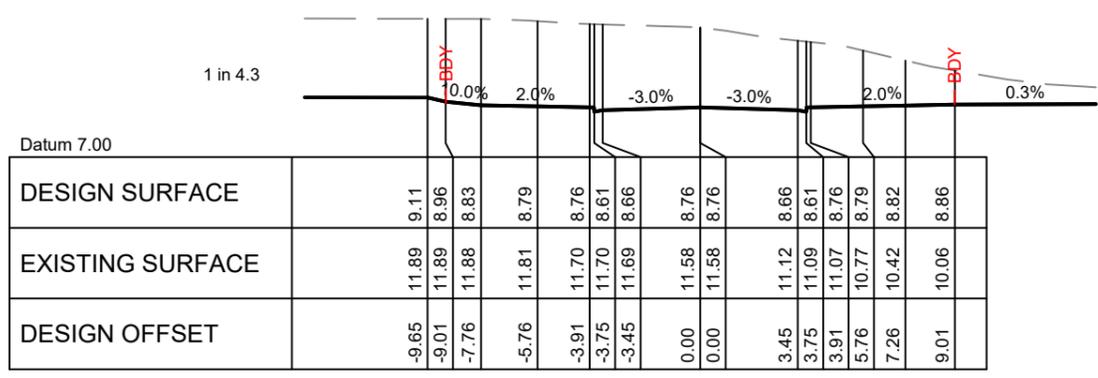
CH. 620.00



CH. 740.00



CH. 720.00



CH. 700.00

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND
INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738

SCALE 1:250



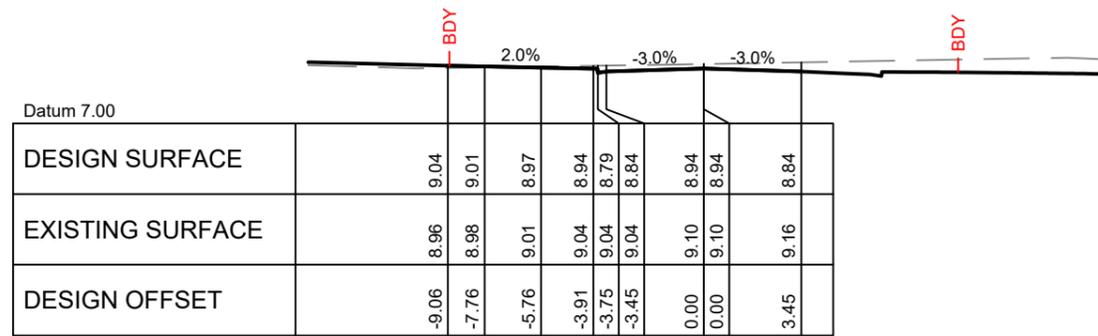
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A	1st ISSUE	07-12-22 KH PC
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

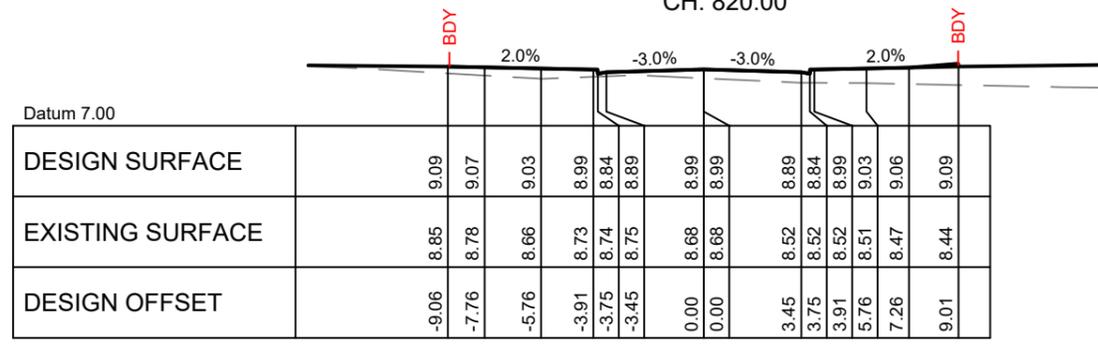
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ROADING CROSS SECTIONS
ROAD 12 - SHEET 1

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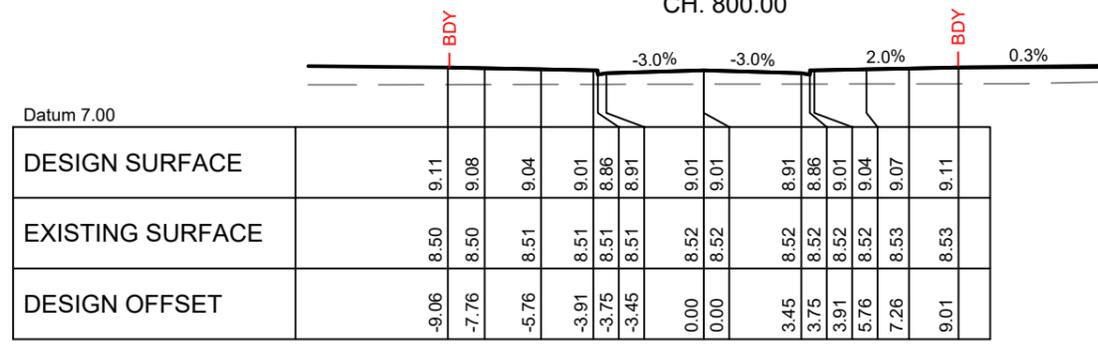
NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



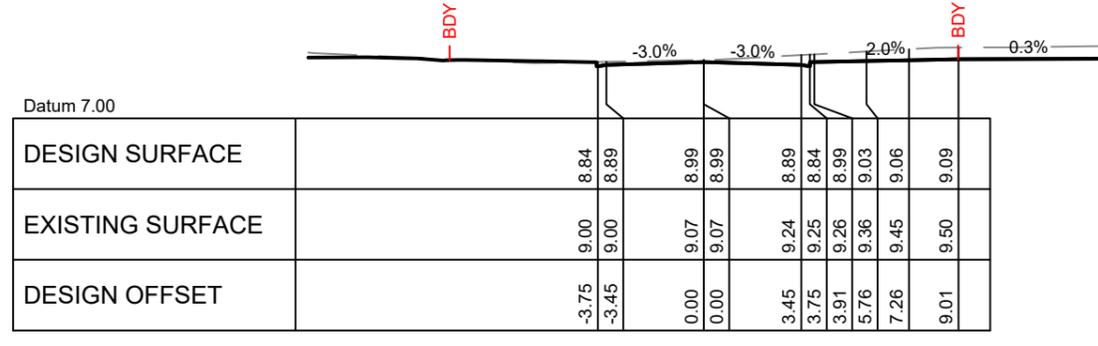
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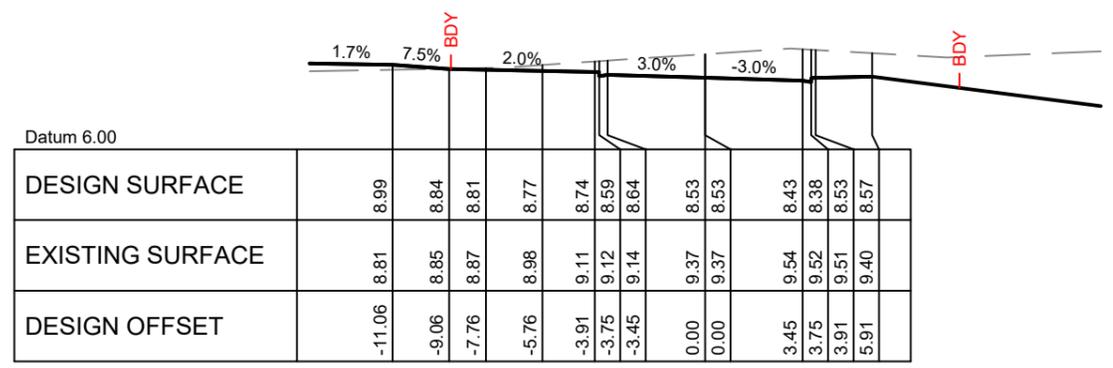
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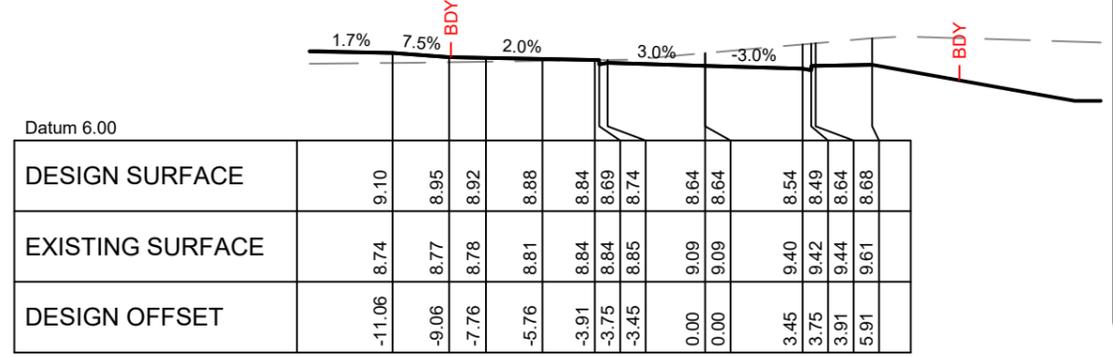
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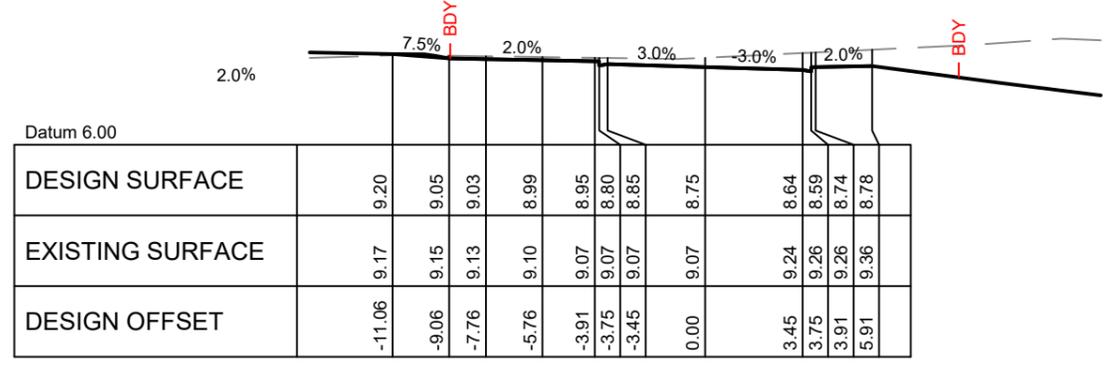
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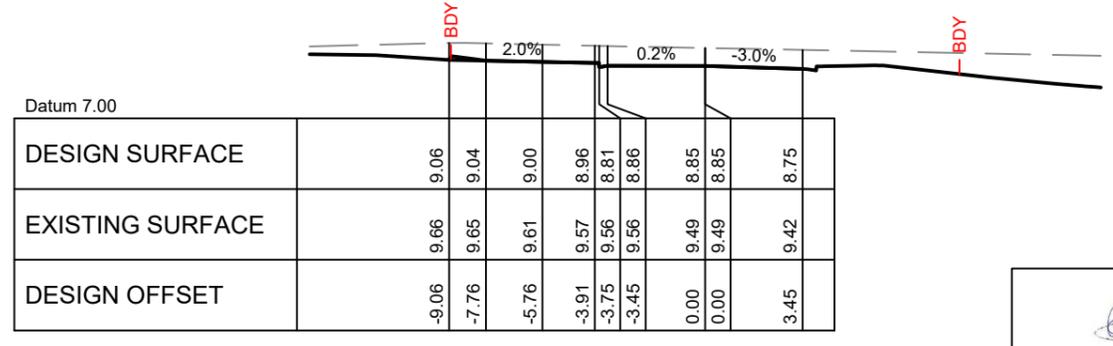
CH. 900.00



CH. 880.00



CH. 860.00



CH. 840.00



IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


 PHILIP COOK
 CPEng#203738

SCALE 1:250



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN APP.	

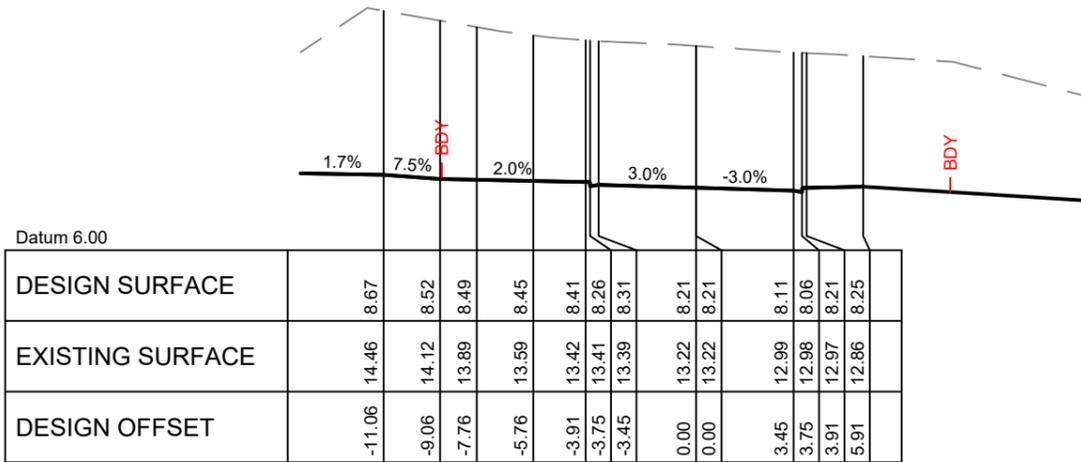
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
ROAD 12 - SHEET 2

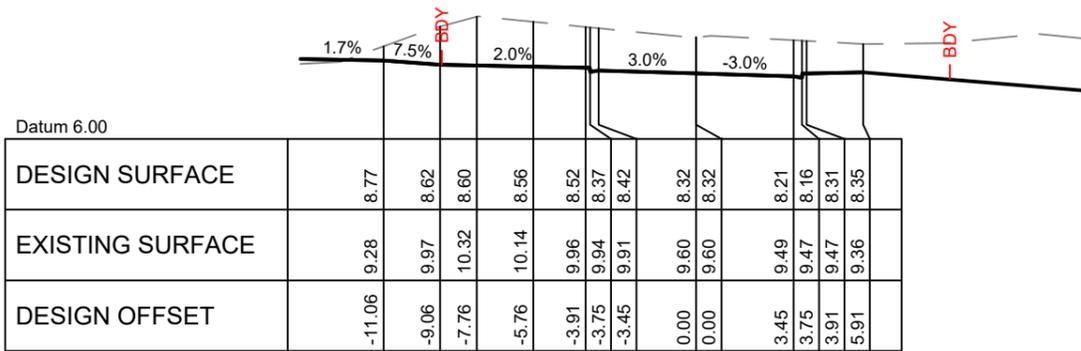
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CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD541	REVISION	B				

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

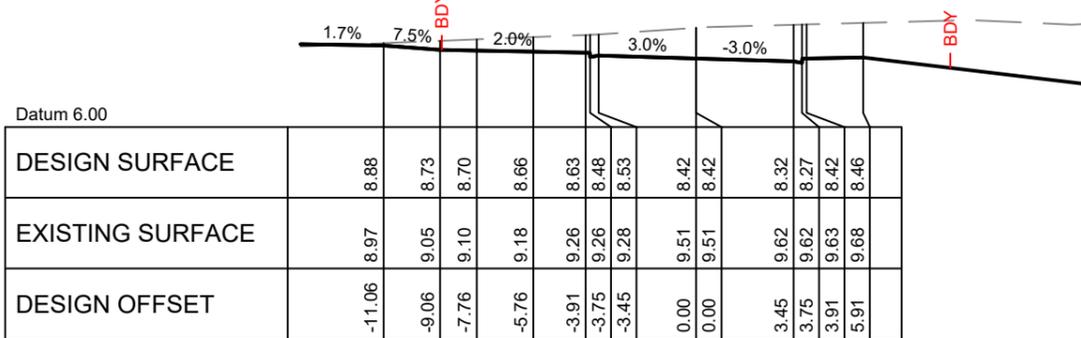
SIZE
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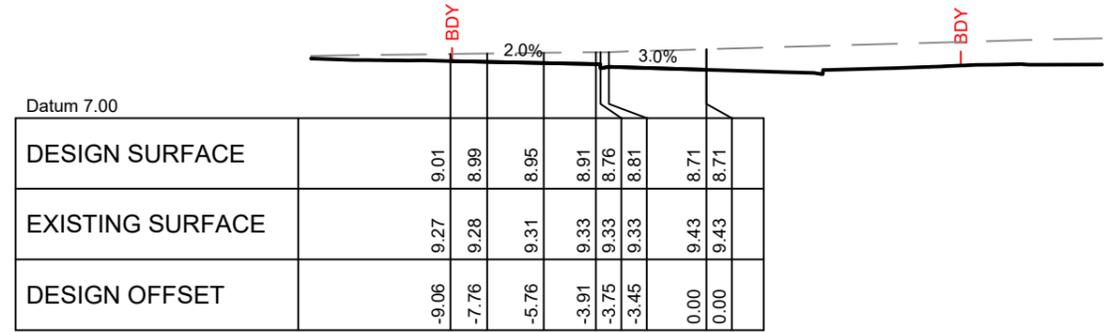
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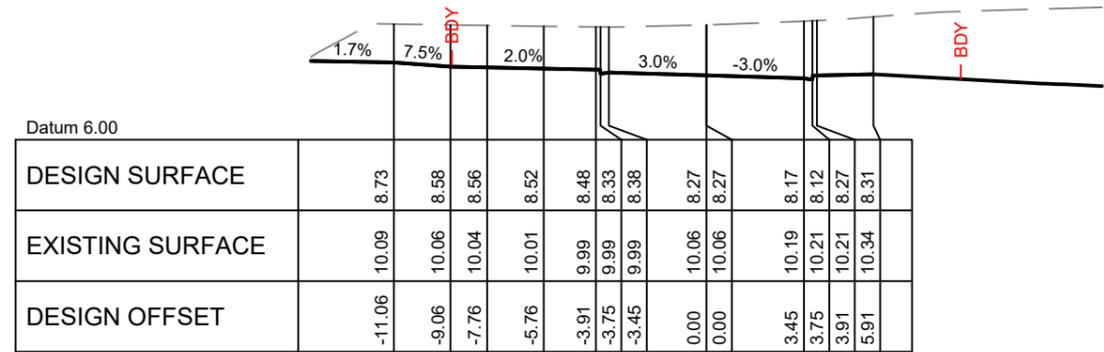
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CH. 920.00



CH. 1020.00



CH. 1000.00



CH. 980.00

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
P34 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

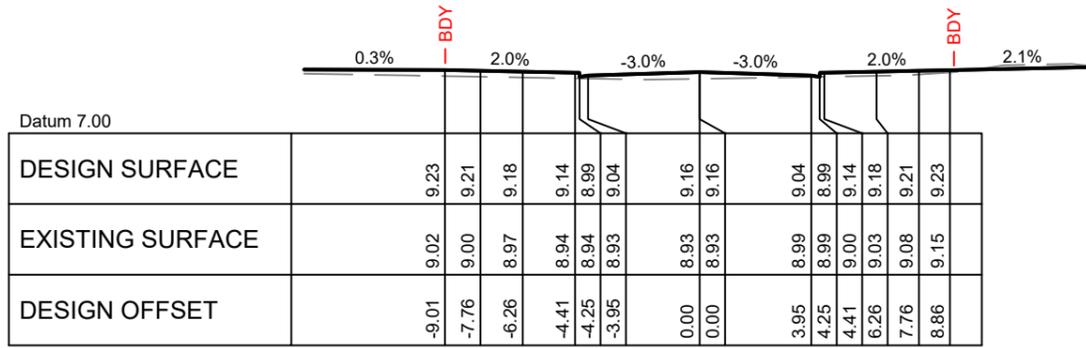
TITLE
ROADING CROSS SECTIONS
ROAD 12 - SHEET 3

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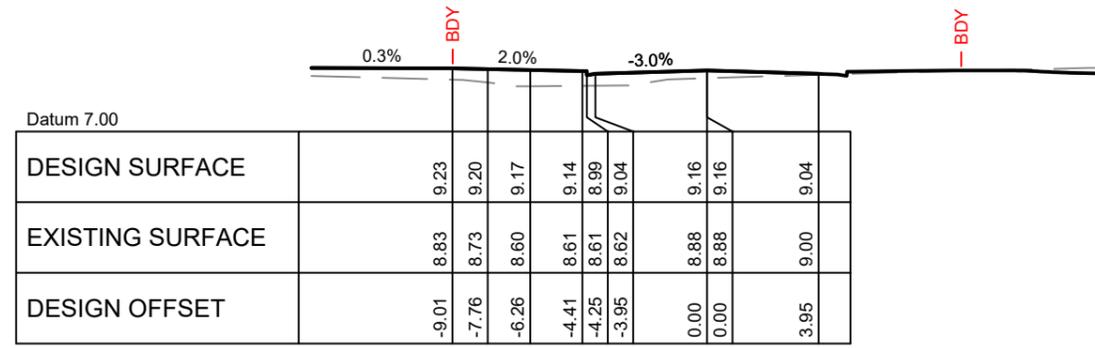
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NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

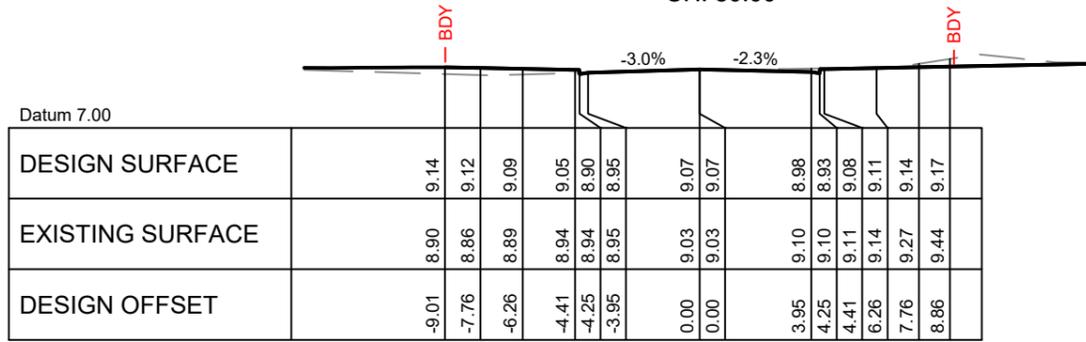
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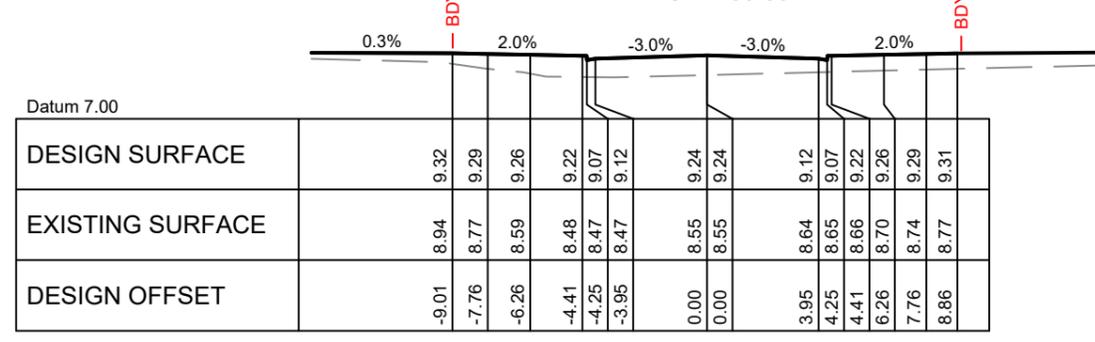
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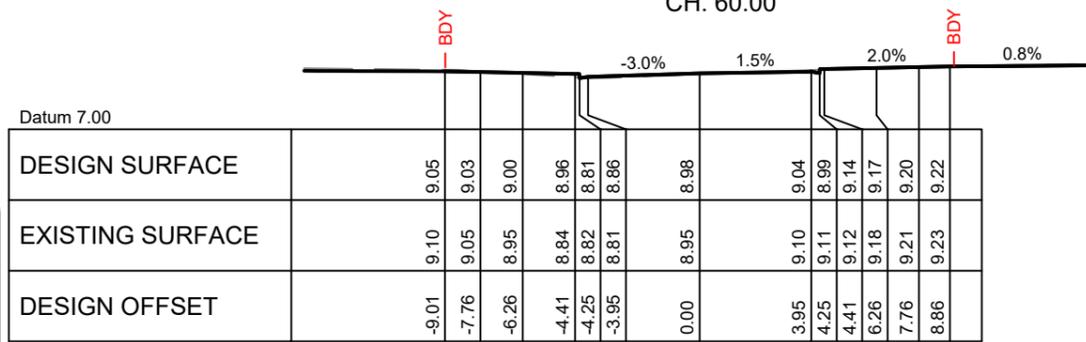
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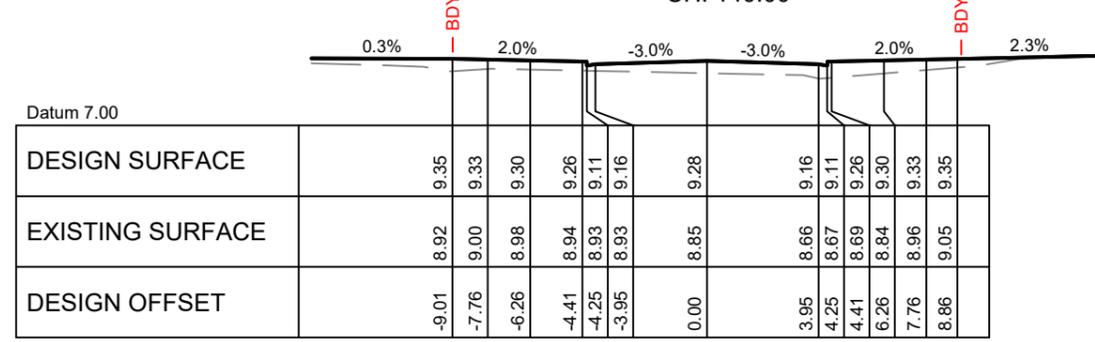
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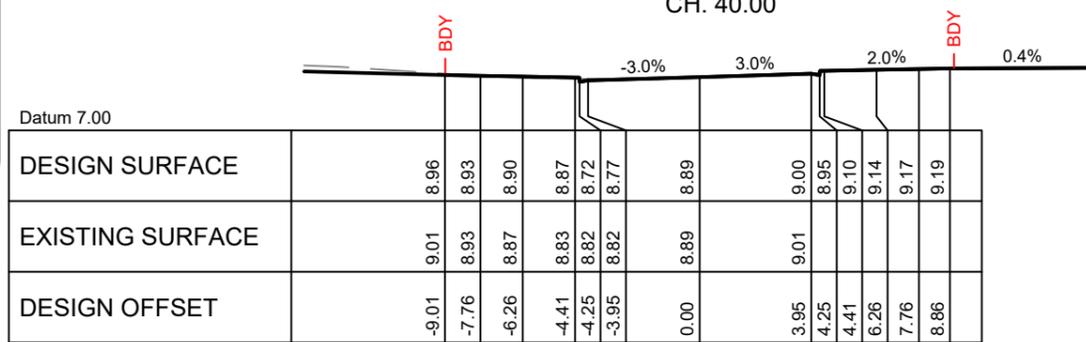
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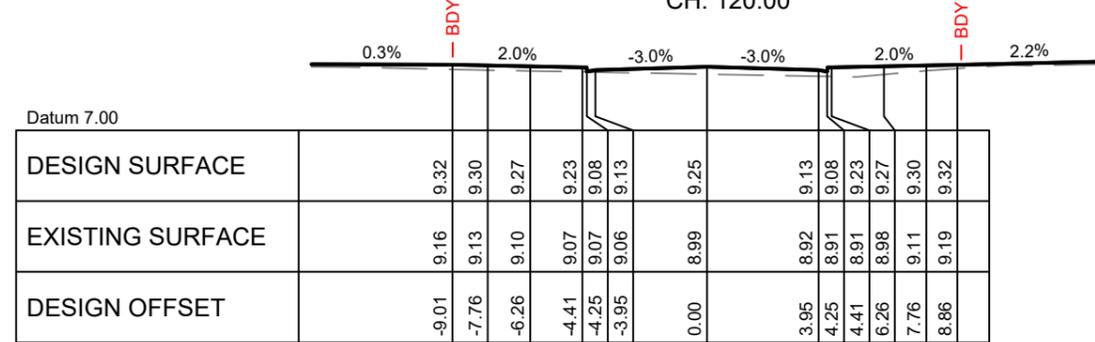
CH. 40.00



CH. 120.00



CH. 20.00



CH. 100.00



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



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B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN APP.	

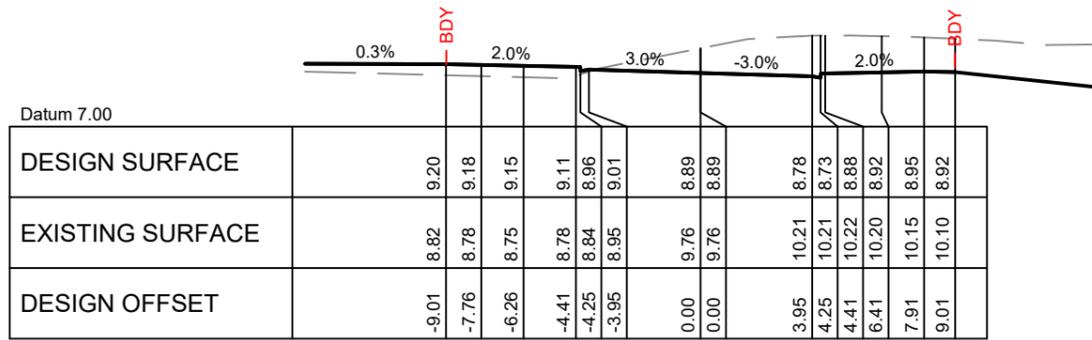
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
ROAD 14 - SHEET 1

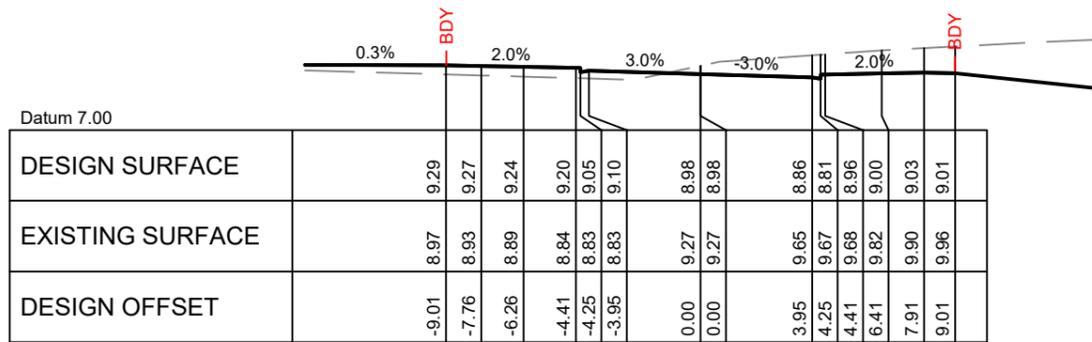
DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS		FOR APPROVAL	
DWG NUMBER	DD543	REVISION		B			

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

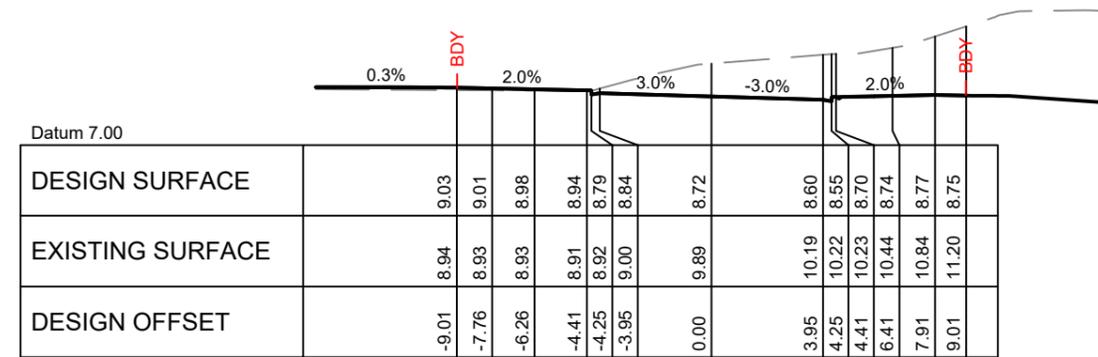
SIZE
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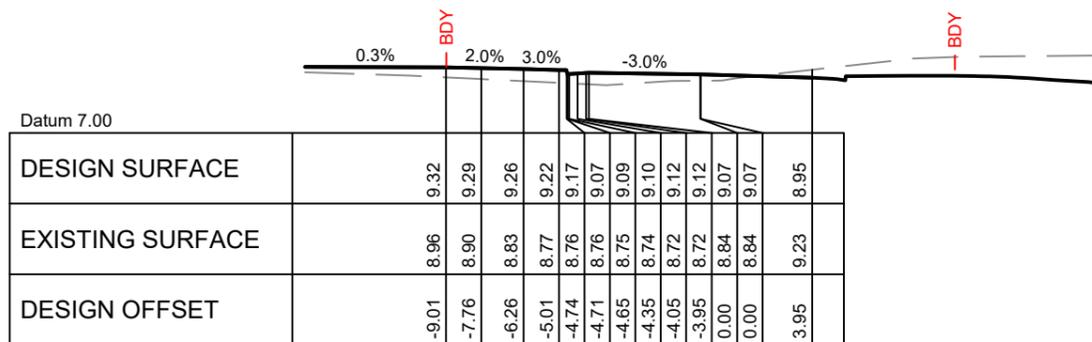
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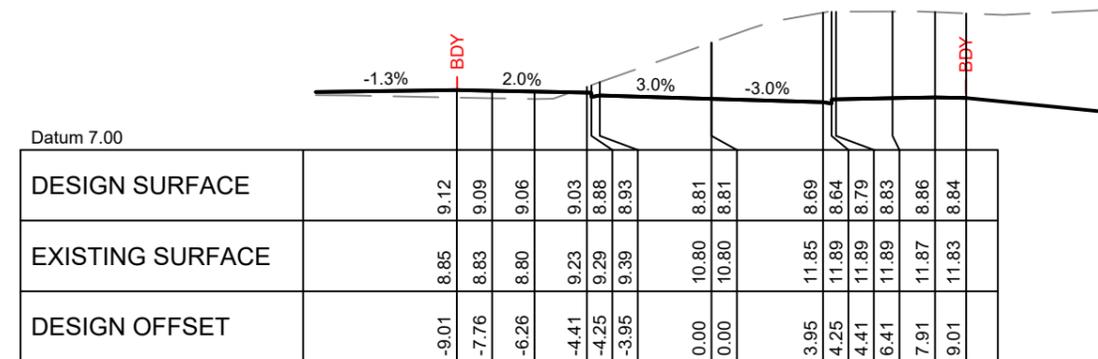
CH. 200.00



CH. 260.00



CH. 180.00



CH. 240.00

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
ROAD 14 - SHEET 2

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD544	REVISION	B				

SCALE 1:250

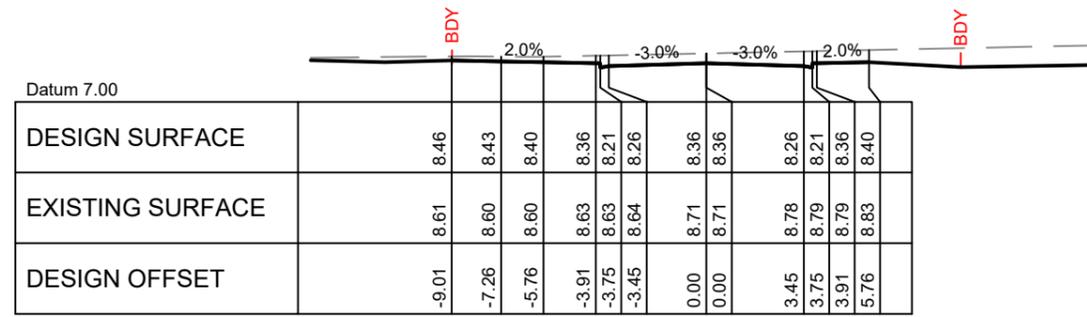
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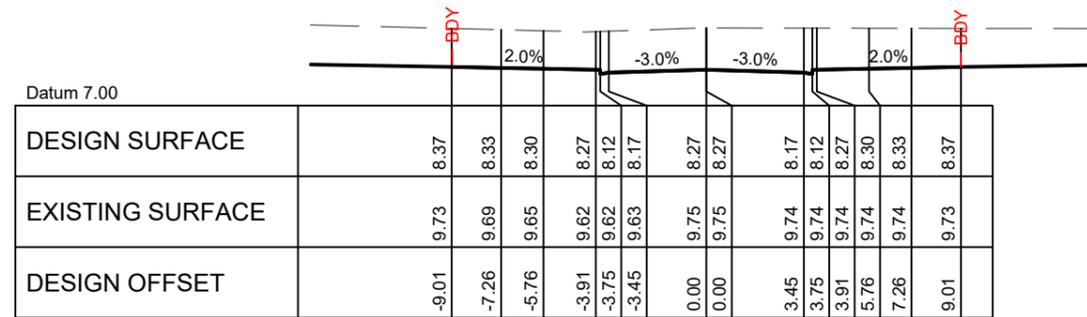
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NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

SIZE
A3



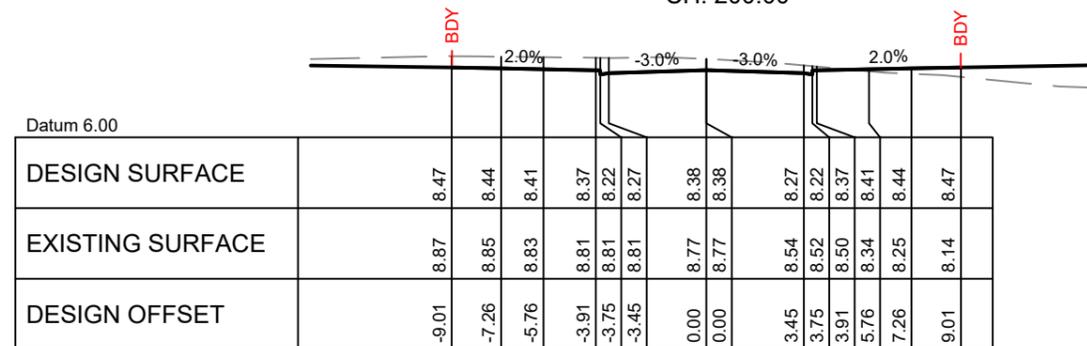
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CH. 200.00



CH. 180.00


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:250



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

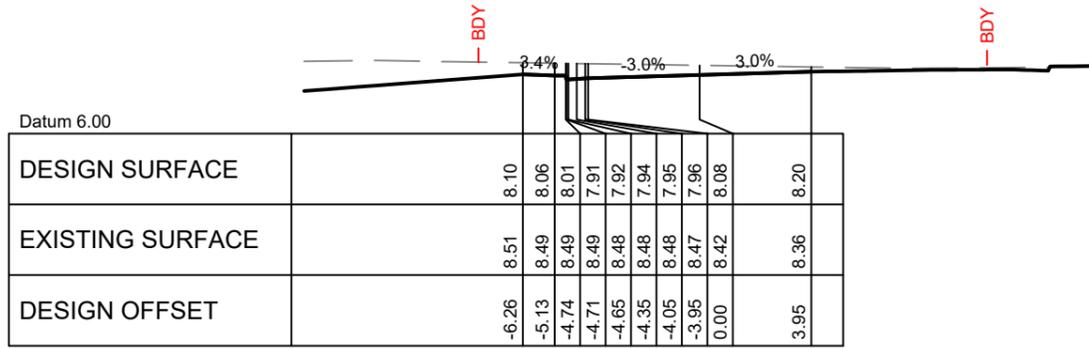
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
ROAD 15 - SHEET 2

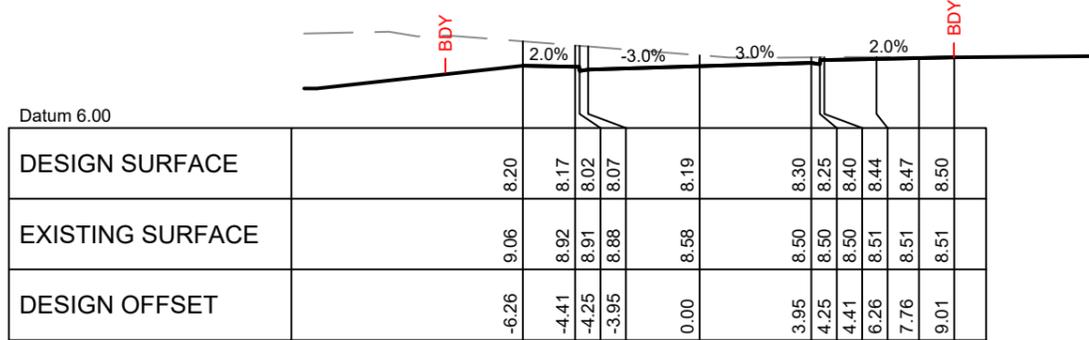
DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD546	REVISION	B				

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

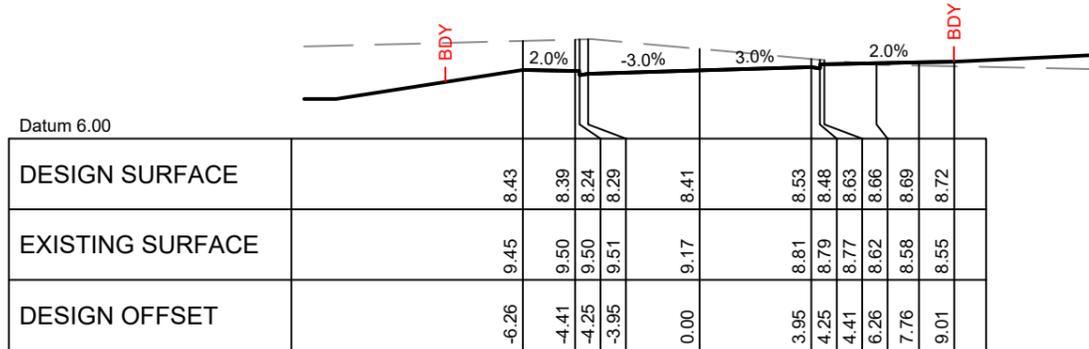
SIZE
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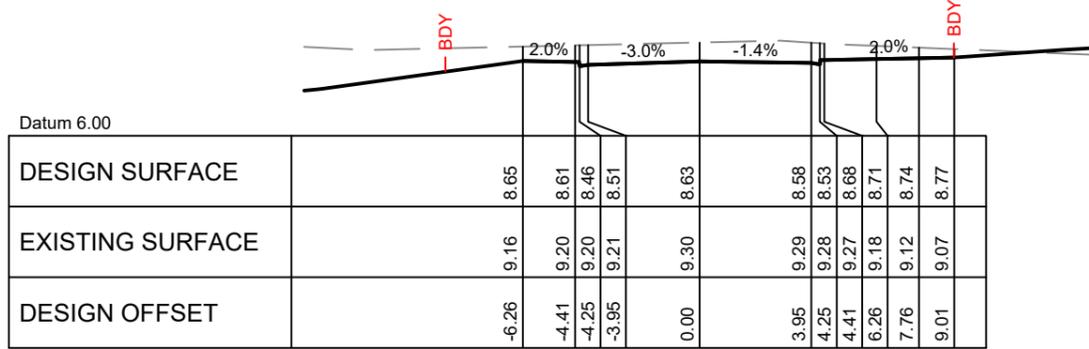
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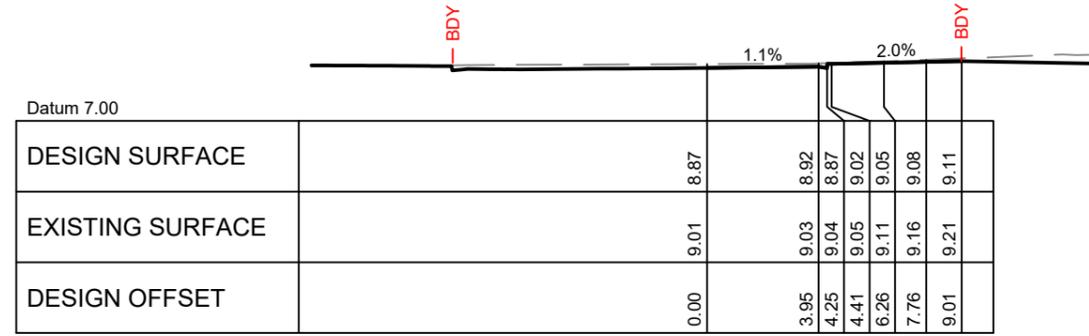
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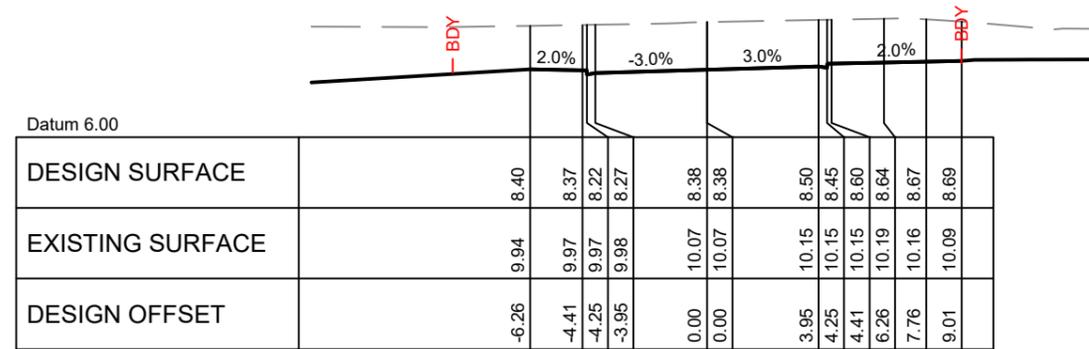
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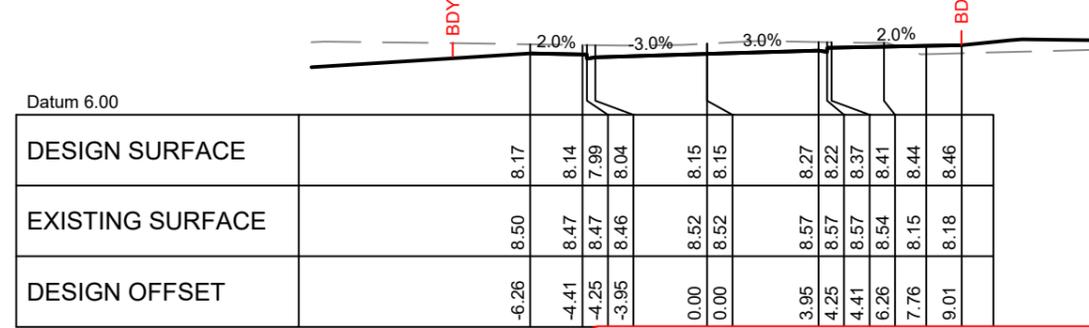
CH. 160.00



CH. 140.00



CH. 120.00




PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C		
B	PLAN SET UPDATED	17-03-23 KH PC
A	1st ISSUE	07-12-22 KH PC
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
ROAD 16 - SHEET 1

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD547	REVISION	B				

SCALE 1:250
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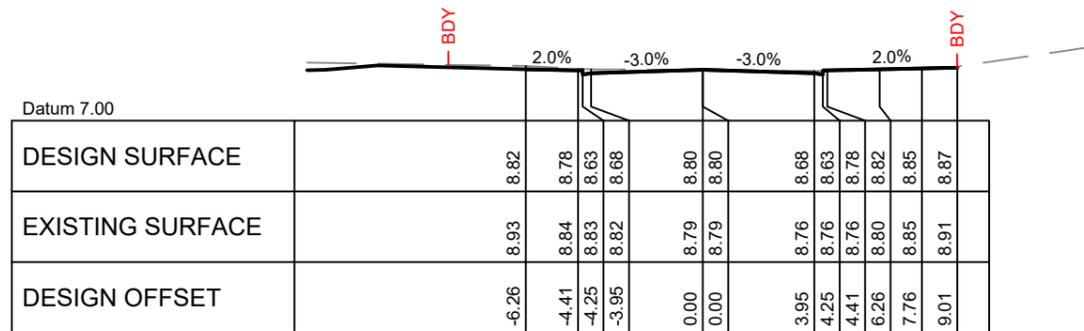
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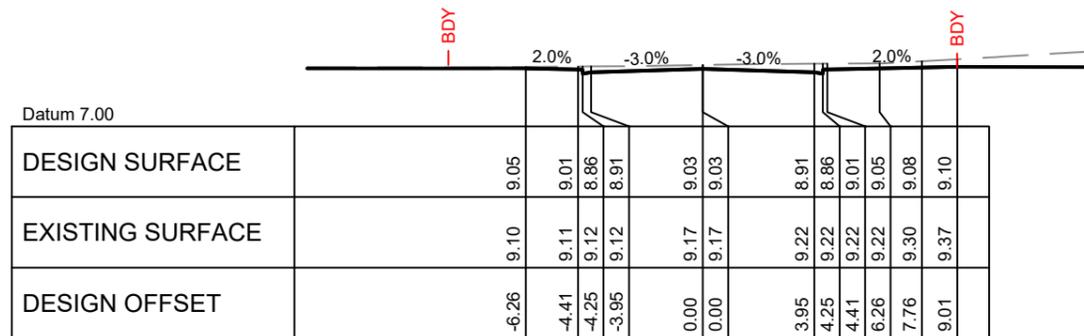
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NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

SIZE
A3



CH. 200.00



CH. 180.00


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:250
10
5
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C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

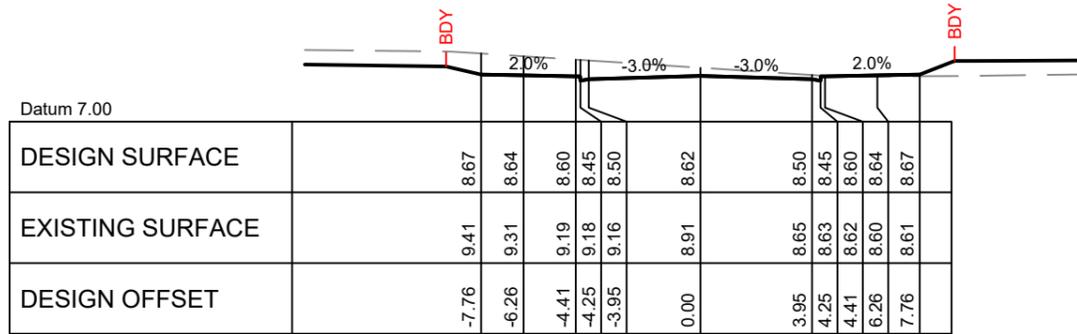
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
ROAD 16 - SHEET 2

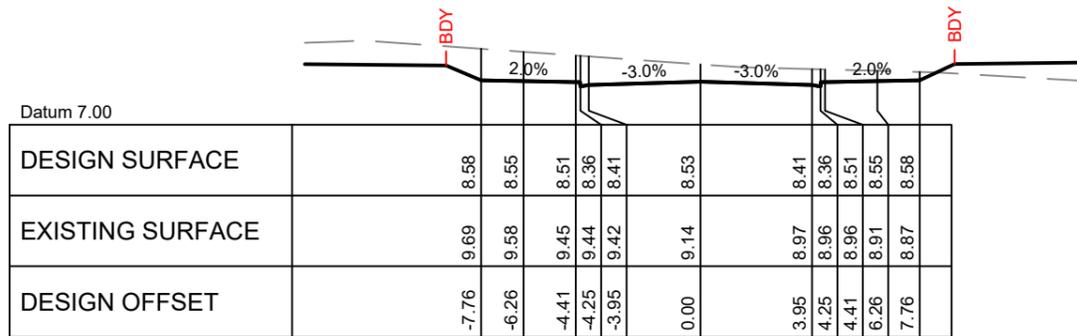
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NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

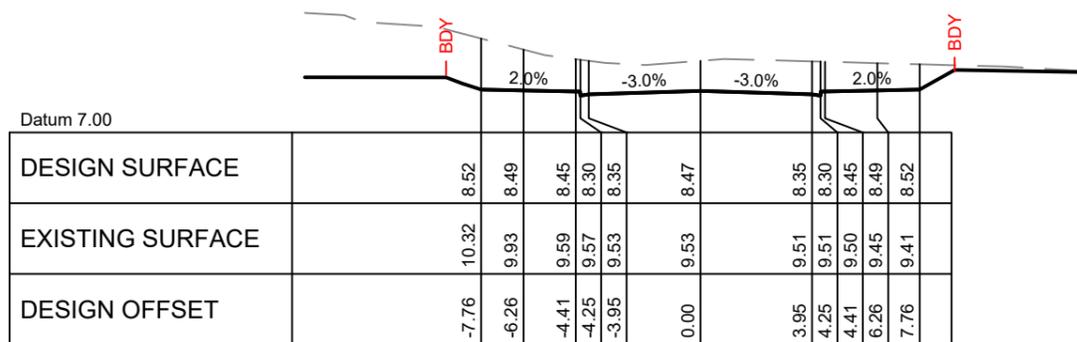
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CH. 60.00



CH. 40.00



CH. 20.00


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



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A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

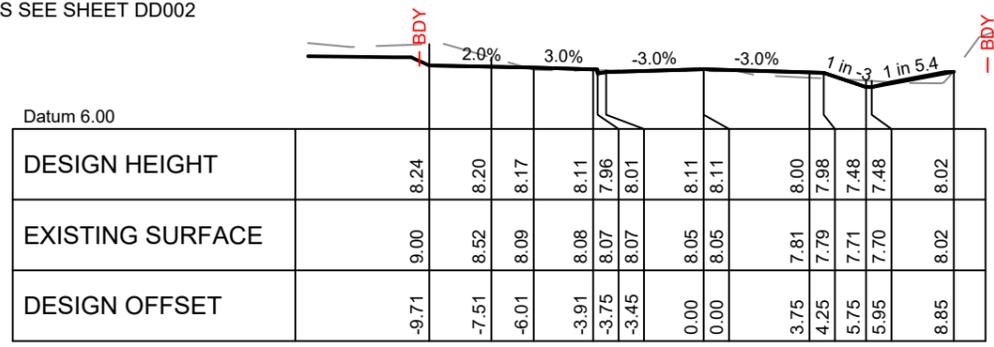
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
ROAD 17

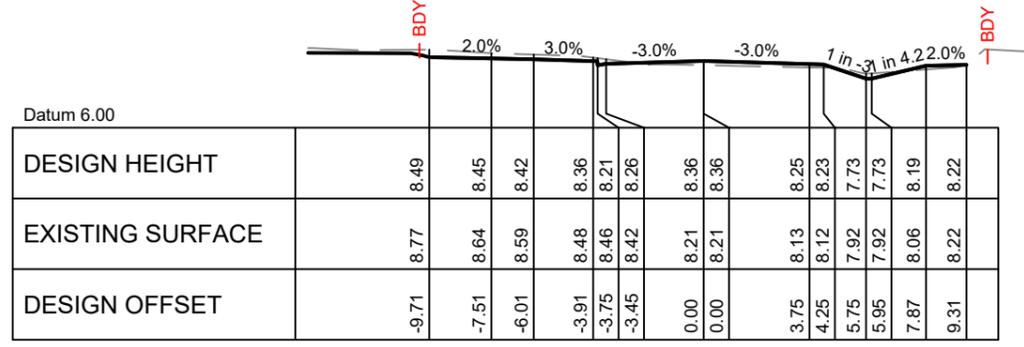
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DWG NUMBER	DD549	REVISION	B				

SCALE 1:250
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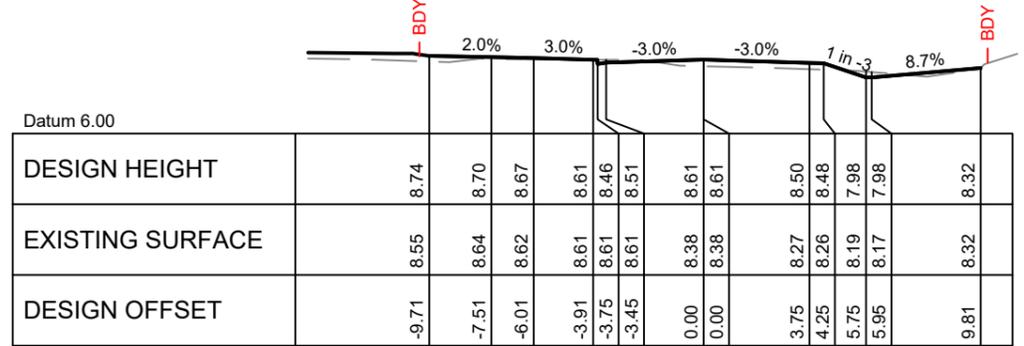
NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



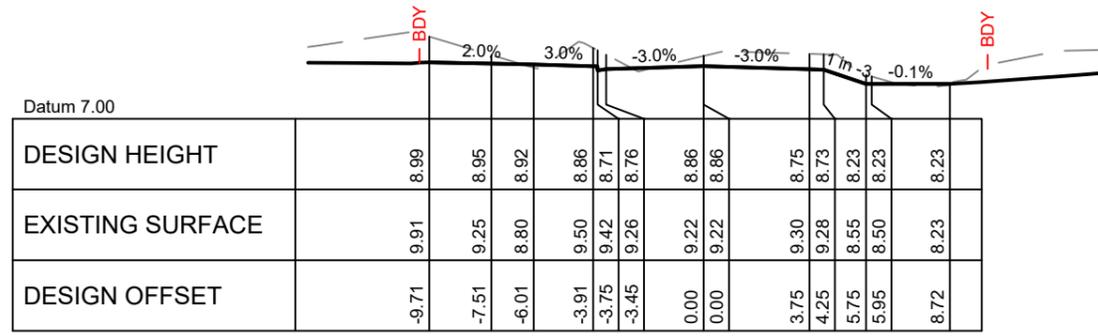
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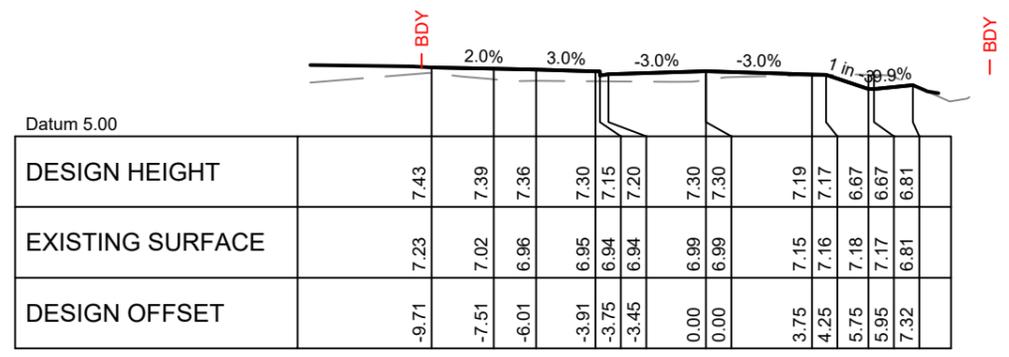
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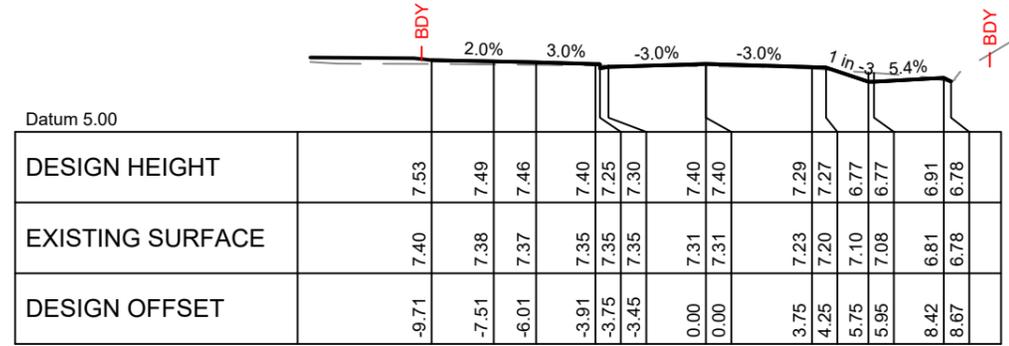
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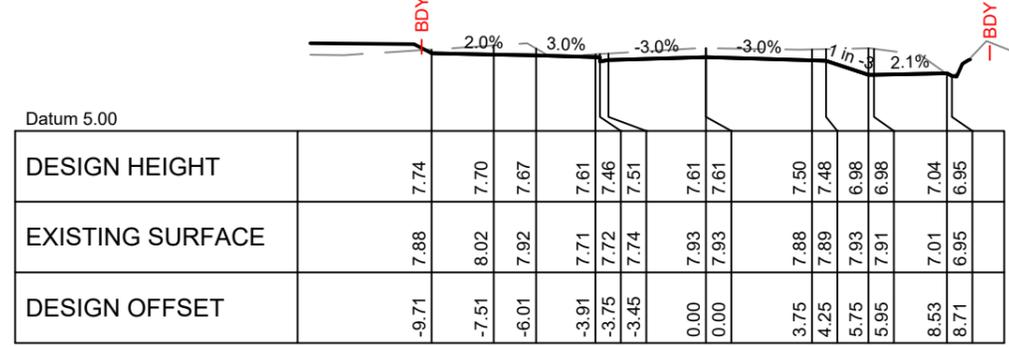
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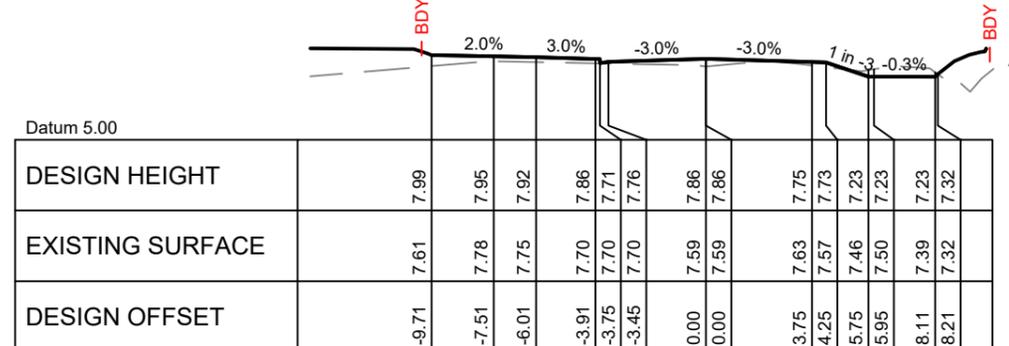
CH. 520.00



CH. 500.00



CH. 480.00



CH. 460.00


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:250



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN APP.	

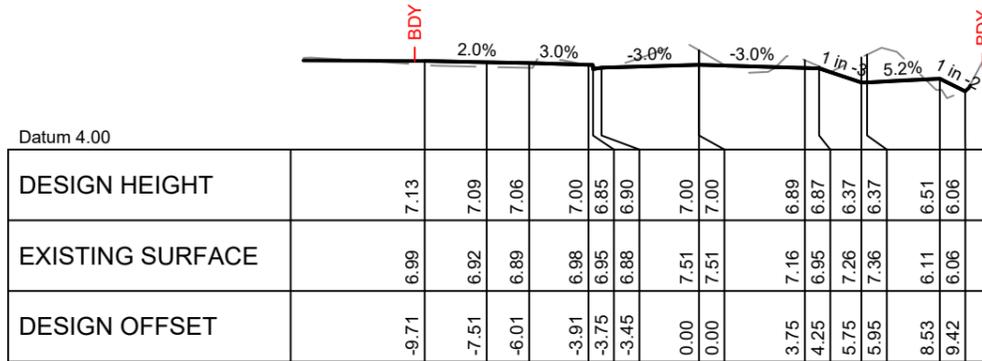
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
ROADING CROSS SECTIONS
PAPER ROAD - SHEET 1

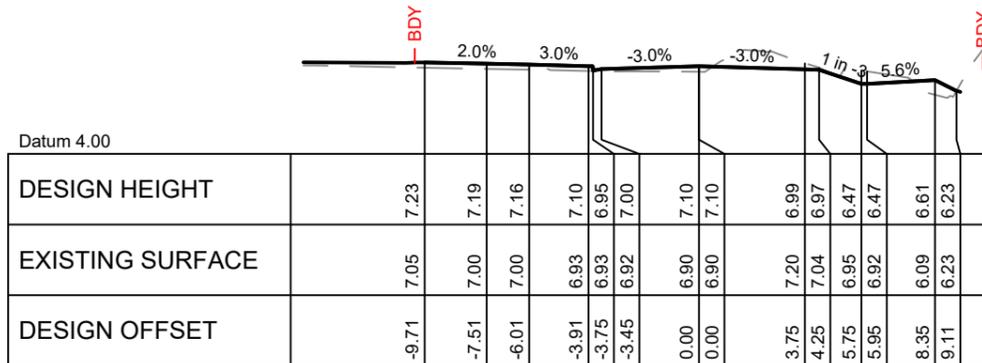
DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD552	REVISION	B				

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

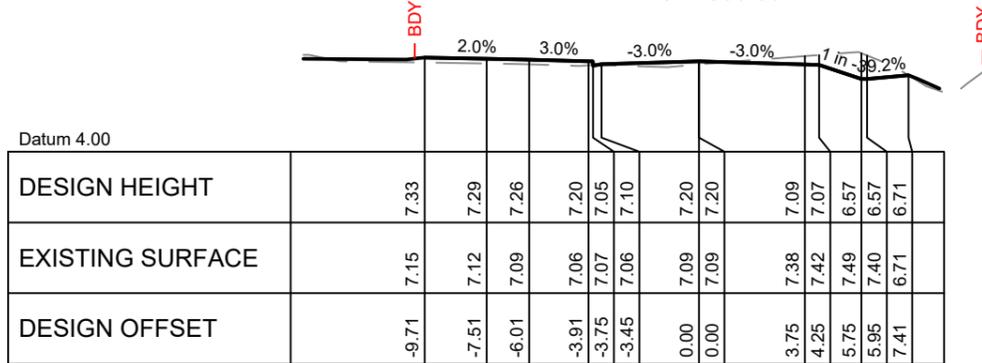
SIZE
A3



CH. 580.00



CH. 560.00



CH. 540.00


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:250



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

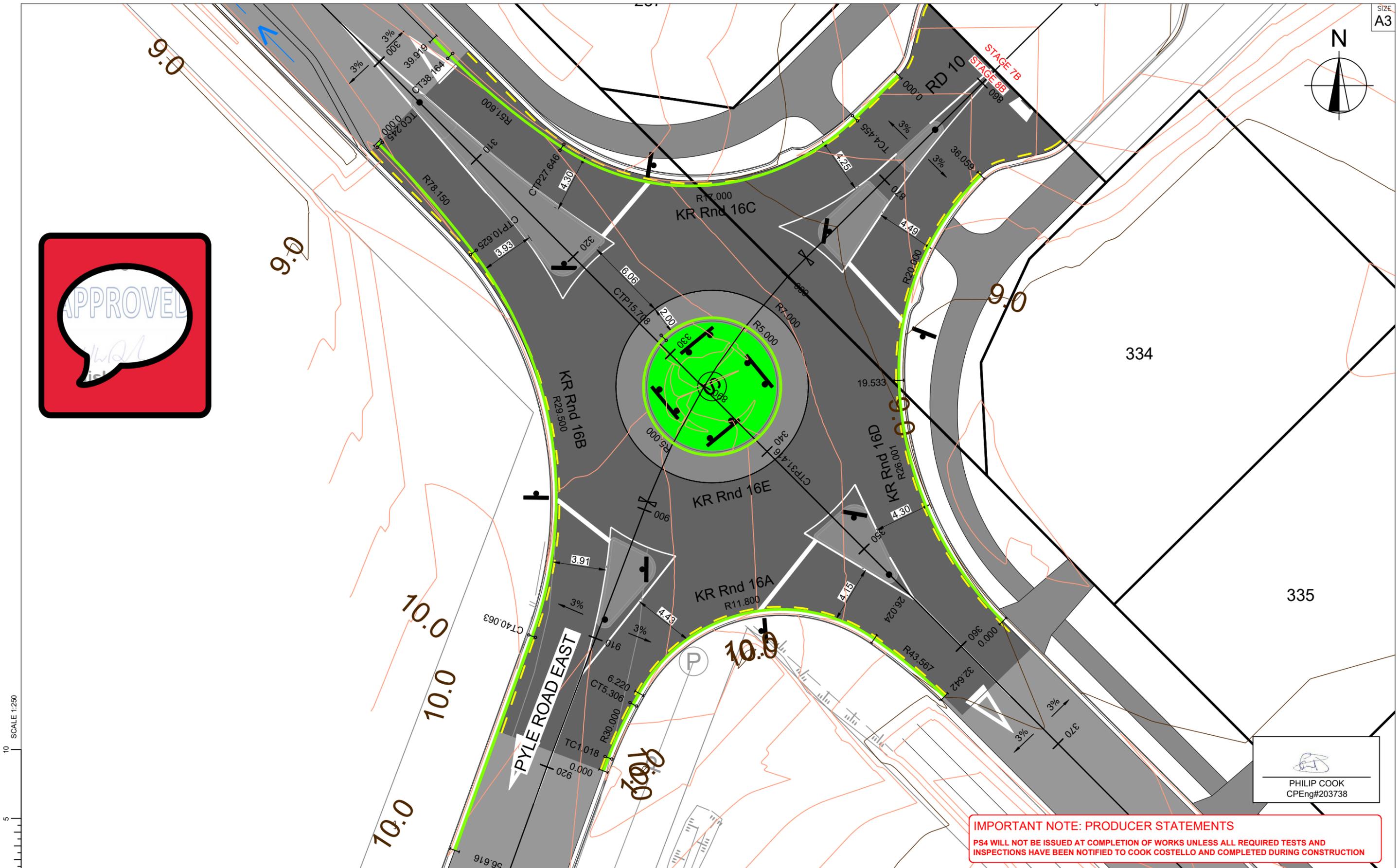
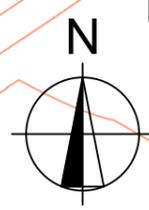
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ROADING CROSS SECTIONS
PAPER ROAD - SHEET 2

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:250 @ A3	FOR APPROVAL	
DWG NUMBER	REVISION		
DD553	B		

SCALE 1:250

DATE PLOTTED: Thursday, March 16, 2023 05:28:08 FILE PATH: c:\12d\stemp\12d\Synergy\12d\SynergyServerService\2816\74688521-363f-4185-b254-c7aee262af2e\14333-009-DD540_553 Road X-Sections.dwg

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PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:250



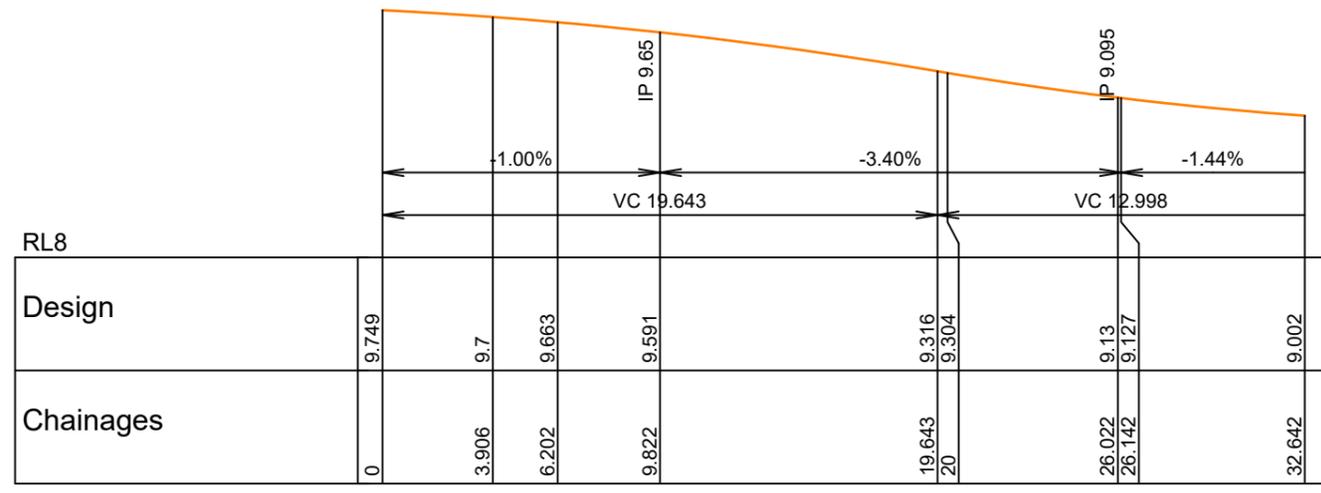
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B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

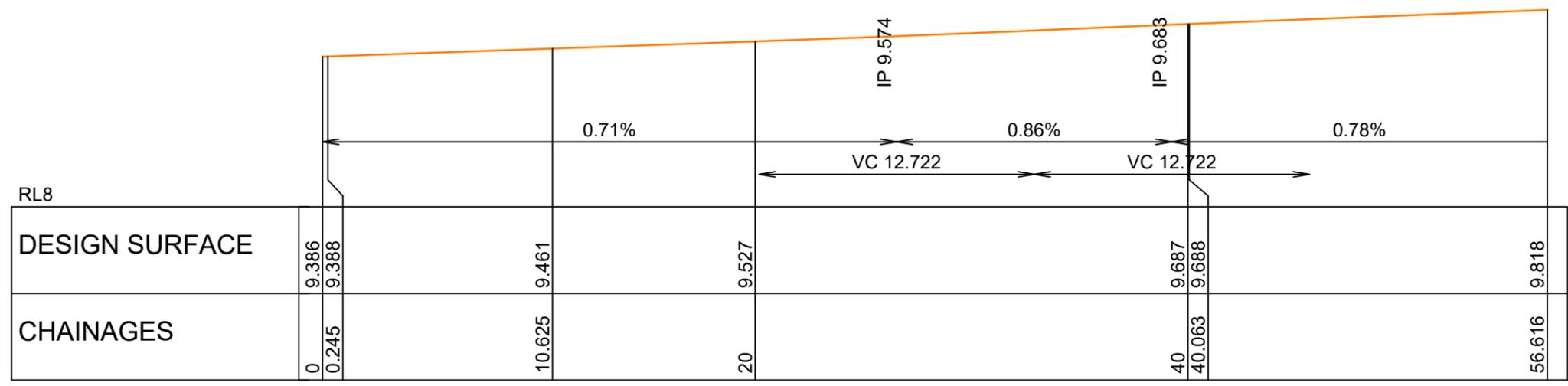
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KERB RETURNS
ROUNDAABOUT 16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD560	REVISION	B				

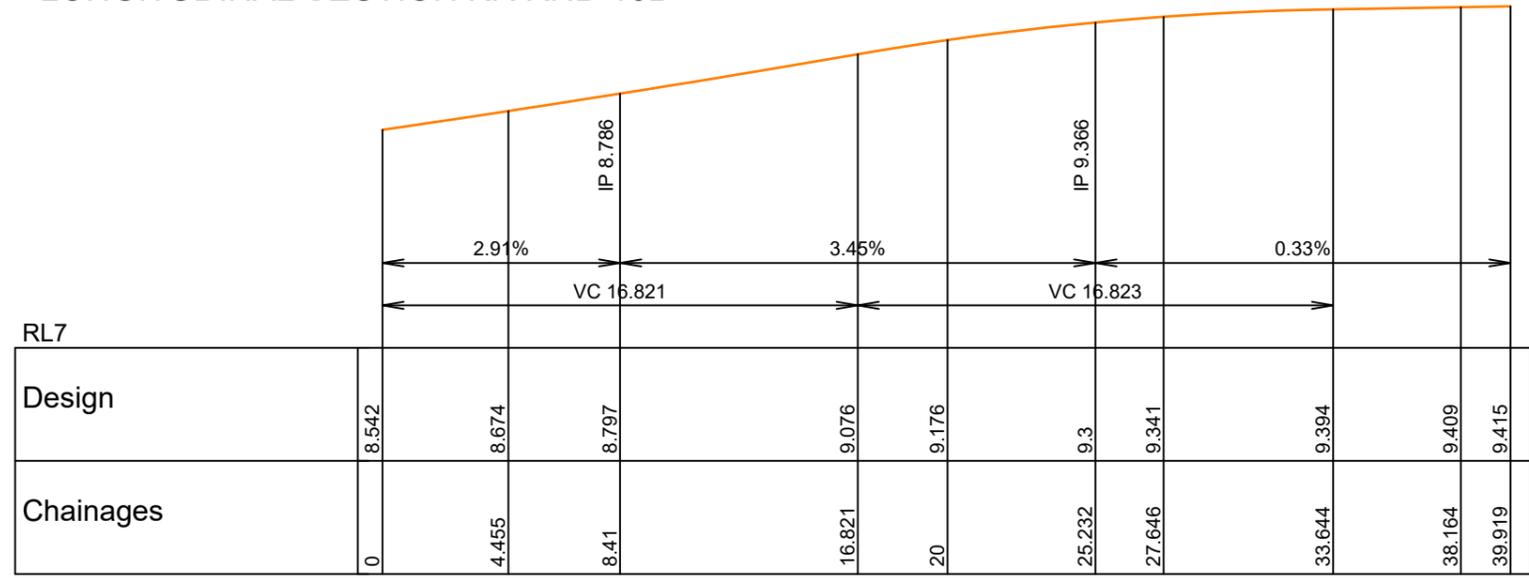
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Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR RND 16A



Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR RND 16B



Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR RND 16C

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

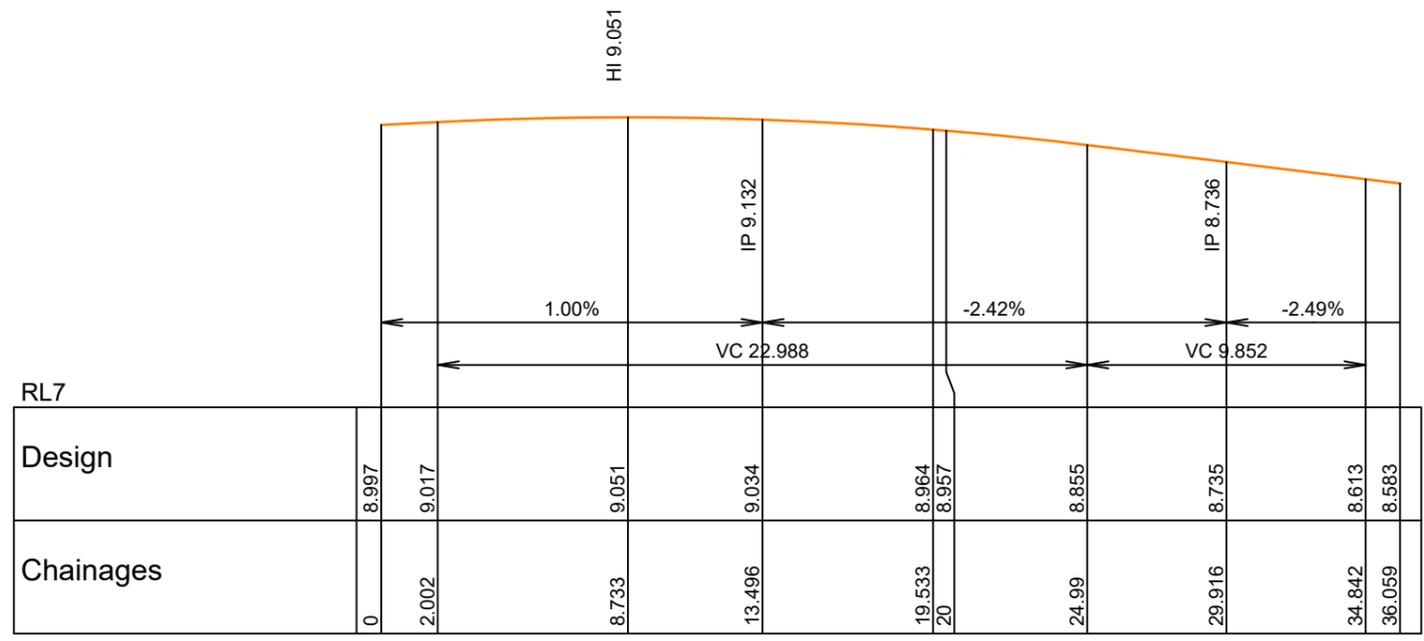

PHILIP COOK
CPEng#203738



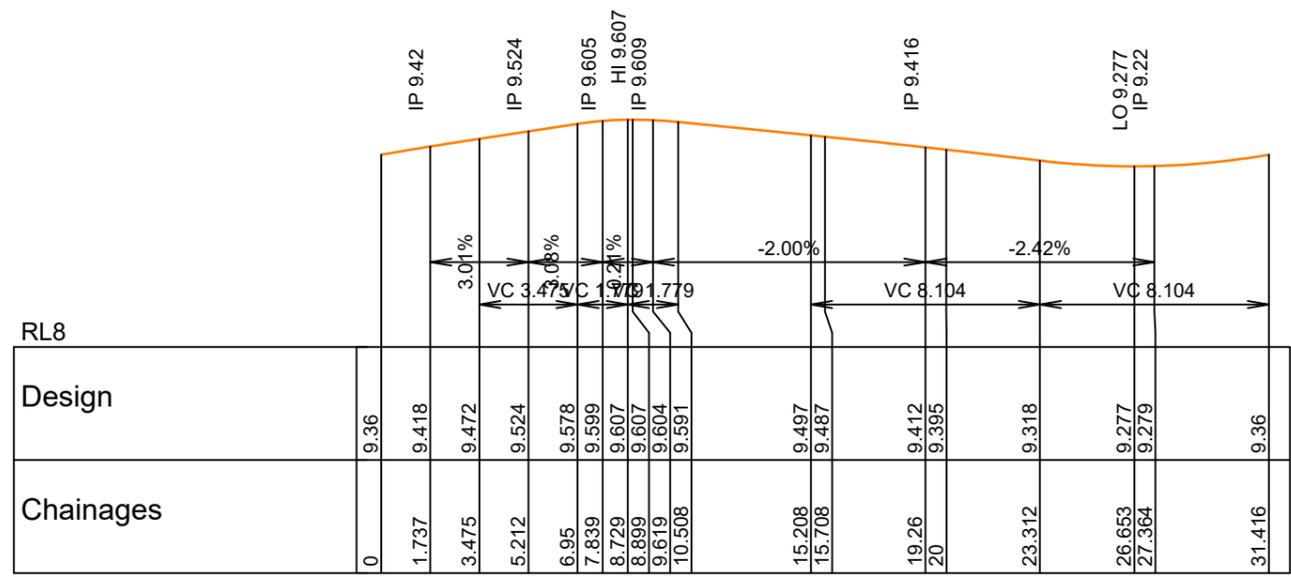
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B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS	TITLE
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	KERB RETURNS ROUNABOUT 16 LONGSECTIONS SHEET 1

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE HZ 1:250, VT 1:50	STATUS FOR APPROVAL	
DWG NUMBER DD561		REVISION B	



Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR RND 16D



Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION RBT KR RD 16 CENTRE


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
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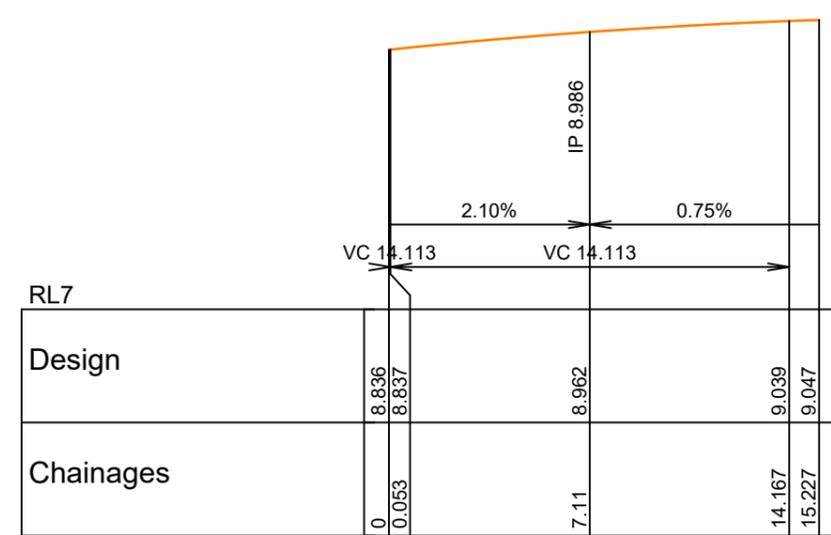
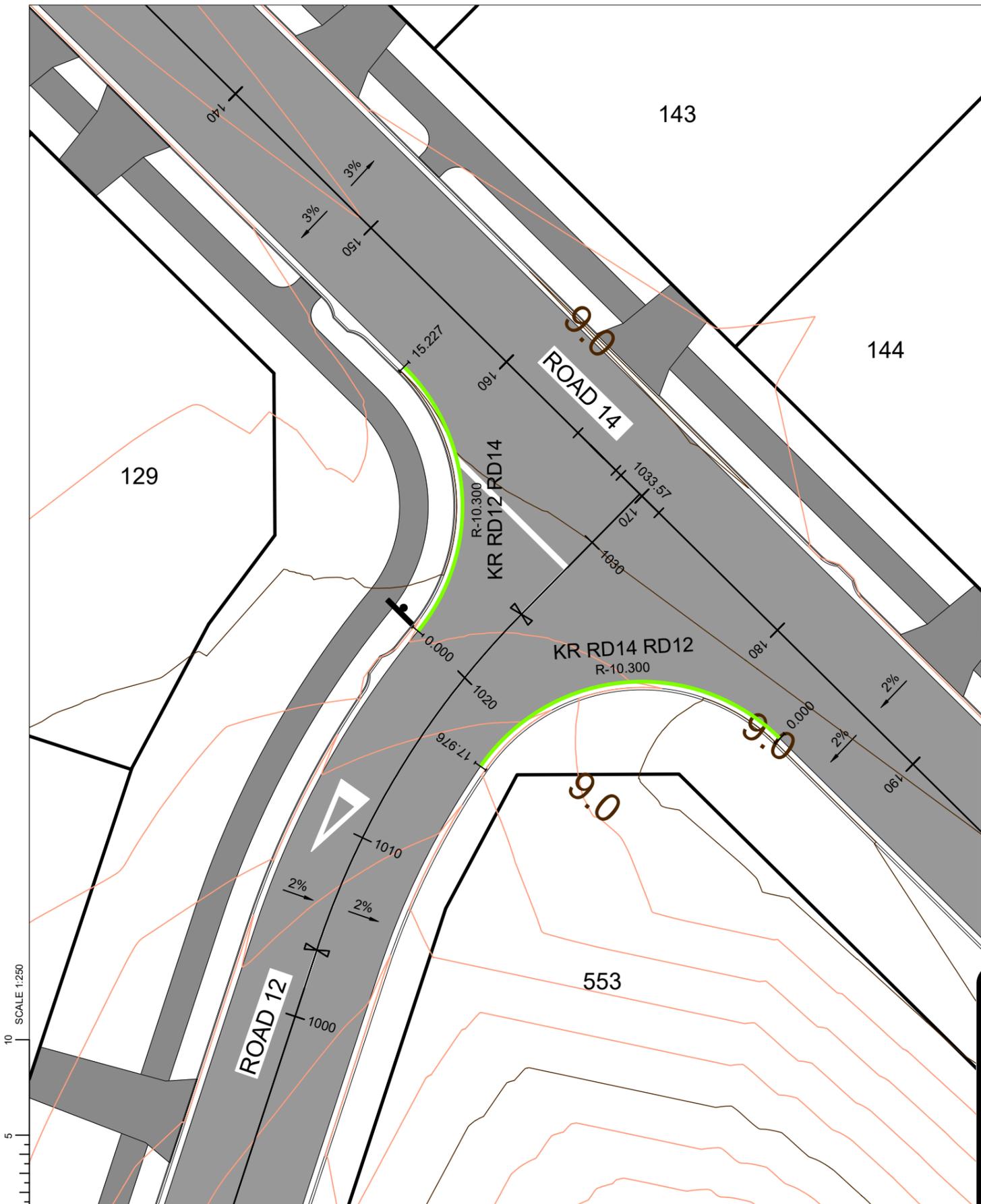
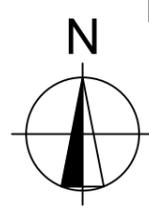
PROJECT DETAILS	
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	

TITLE	
KERB RETURNS ROUNDAABOUT 16 LONGSECTIONS SHEET 2	

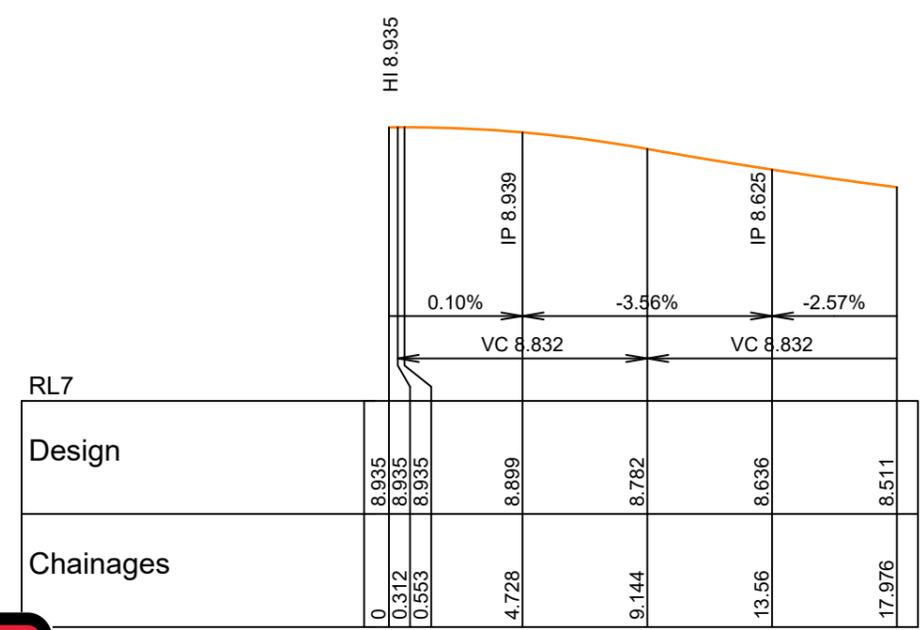
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07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	HZ 1:250, VT 1:50	FOR APPROVAL	
DWG NUMBER	REVISION		
DD562	B		

SCALE 1:50

SCALE 1:250



Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR RD12 RD14



Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR RD14 RD12




PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



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A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

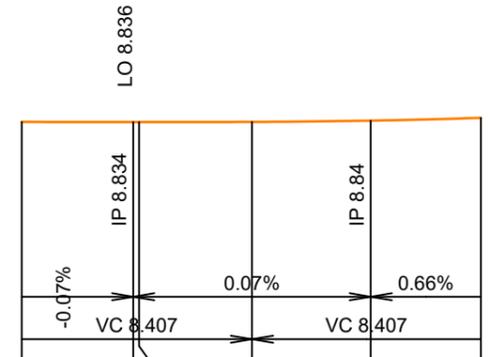
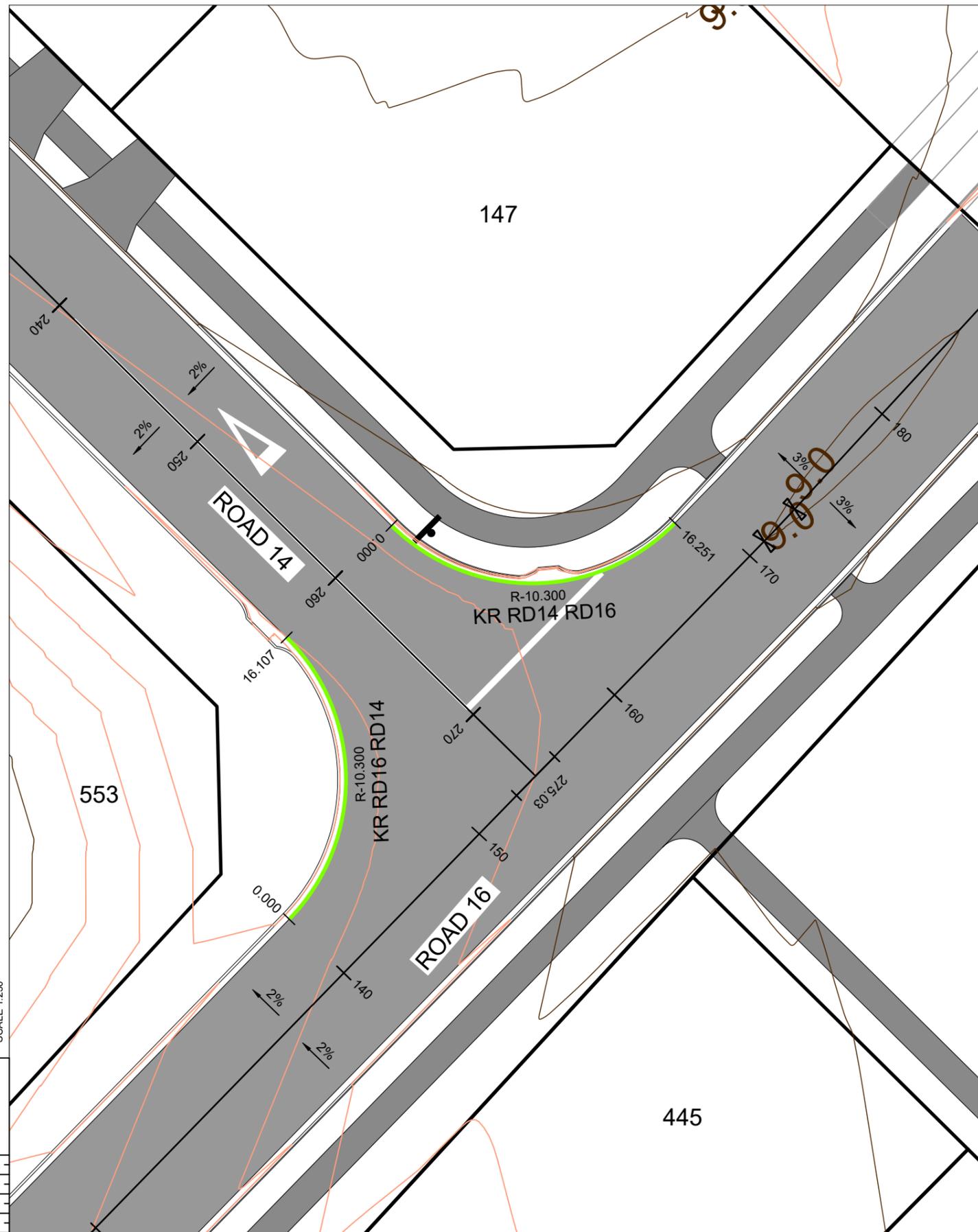
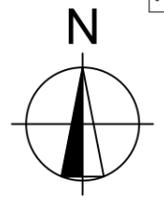
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

KERB RETURNS
INTERSECTION OF ROADS 12 AND 14

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD563	REVISION	B				

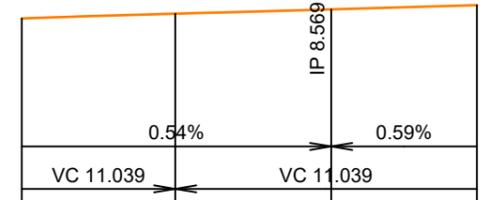
SCALE 1:250
0 5 10

SCALE 1:250



RL7					
Design	8.837	8.836	8.837	8.846	8.865
Chainages	0	3.944	8.147	12.351	16.251

Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION RD KR RD14 RD16



RL7				
Design	8.506	8.539	8.57	8.6
Chainages	0	5.43	10.95	16.107

Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION RD KR RD16 RD14


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

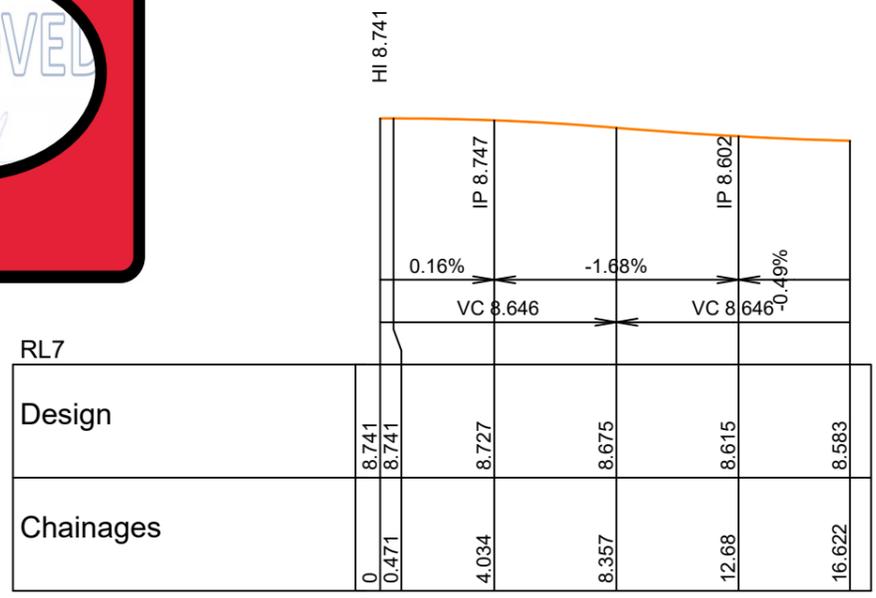
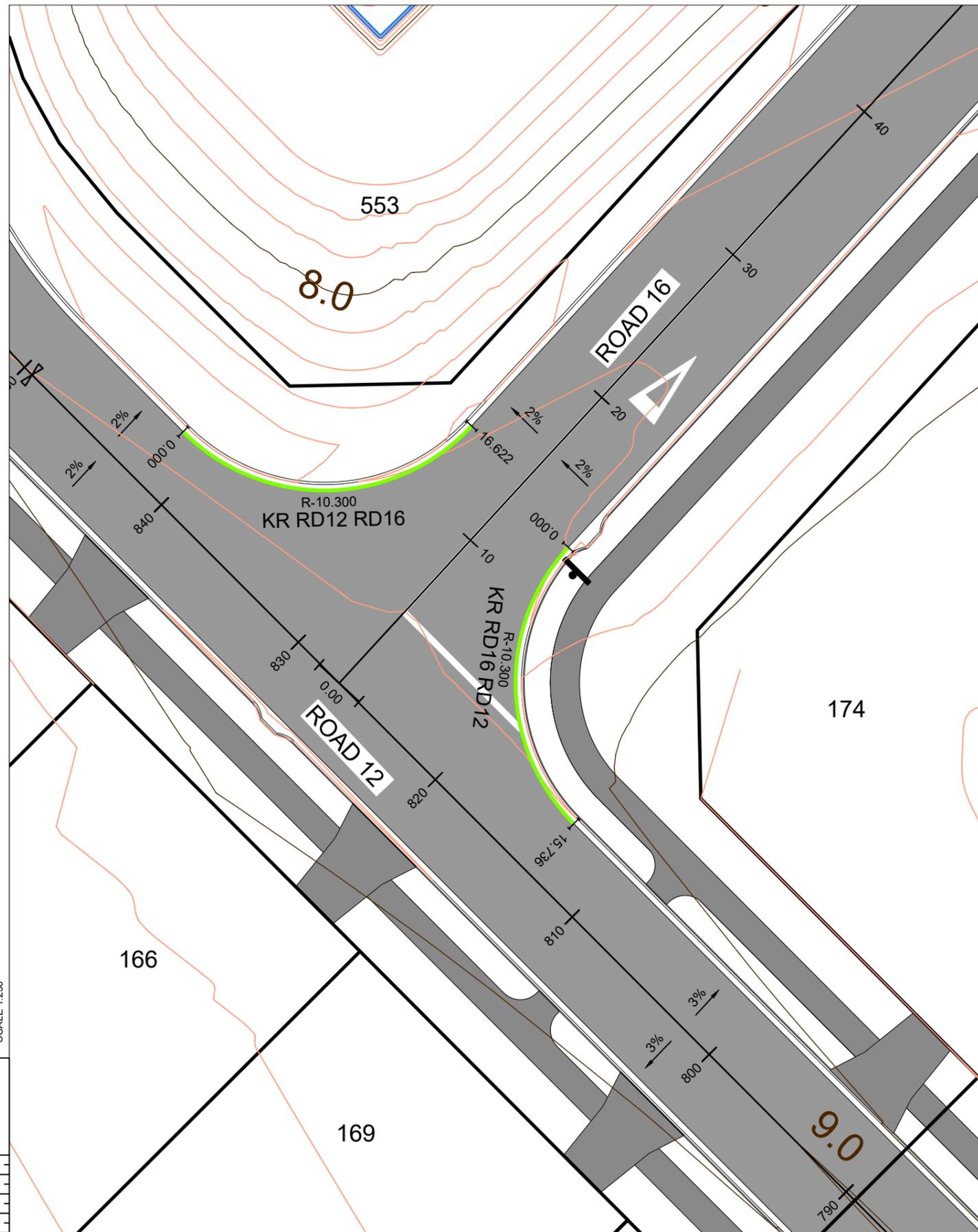
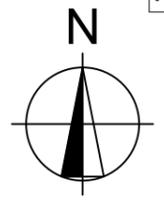


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B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

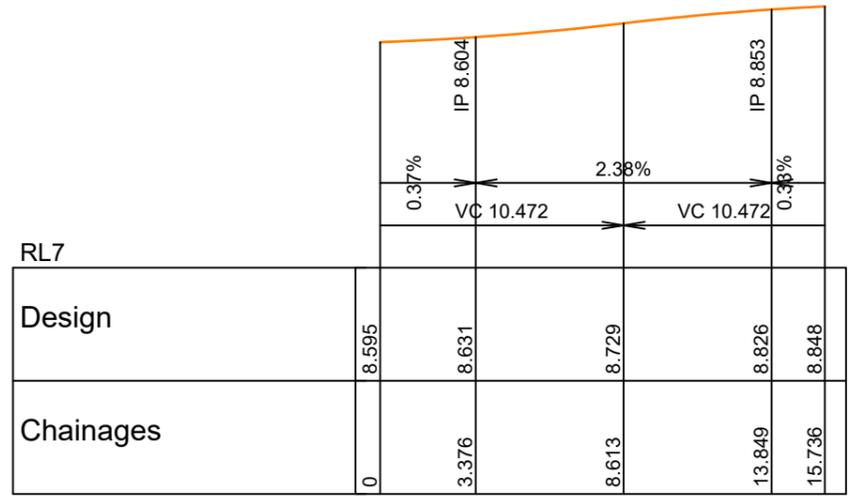
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
INTERSECTION OF ROADS 14 AND 16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD564	REVISION	B				



Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR RD12 RD16



Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR RD16 RD12


PHILIP COOK
CPeng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



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B	PLAN SET UPDATED	17-03-23 KH PC
A	1st ISSUE	07-12-22 KH PC
REV.	REVISION DETAILS	DRAWN APP.

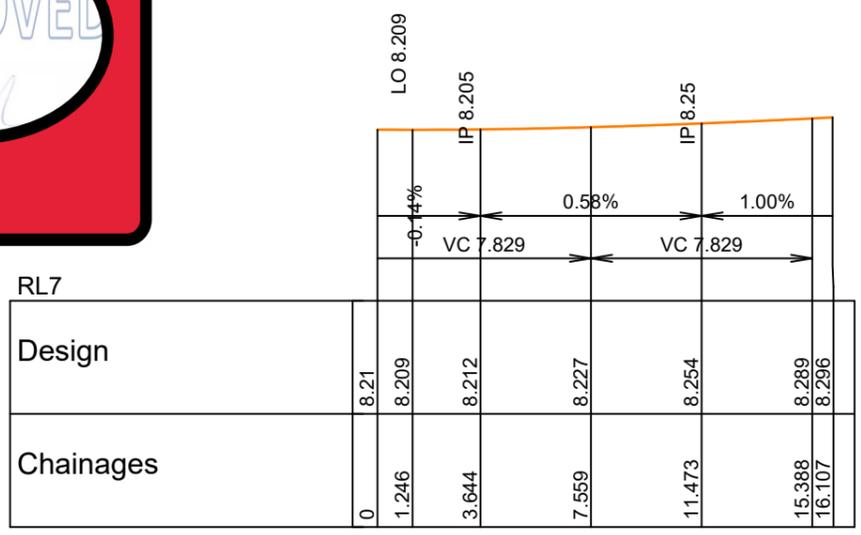
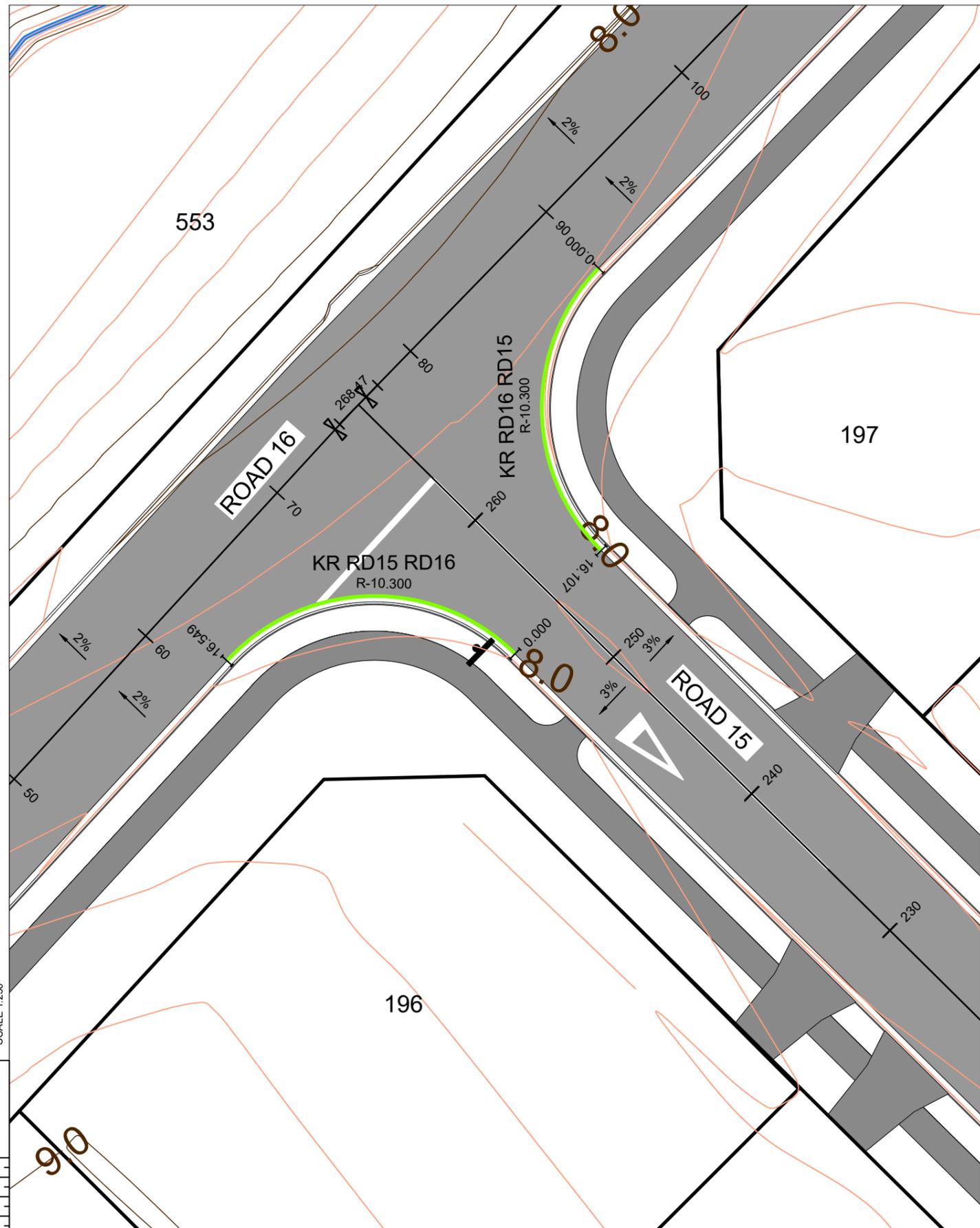
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
INTERSECTION OF ROADS 12 AND 16

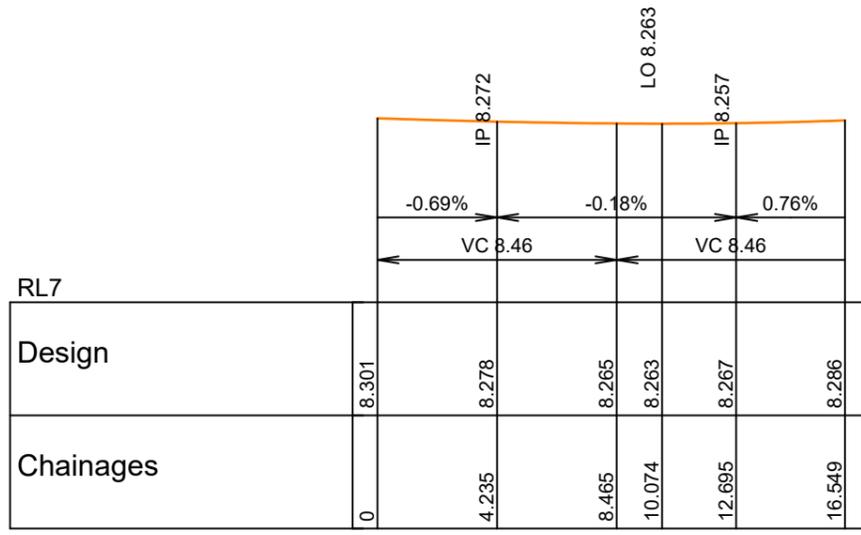
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DWG NUMBER	DD565	REVISION	B				

SCALE 1:250
0 5 10

SCALE 1:250
0 5 10



LONGITUDINAL SECTION KR RD16 RD15



LONGITUDINAL SECTION KR RD15 RD16


 PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

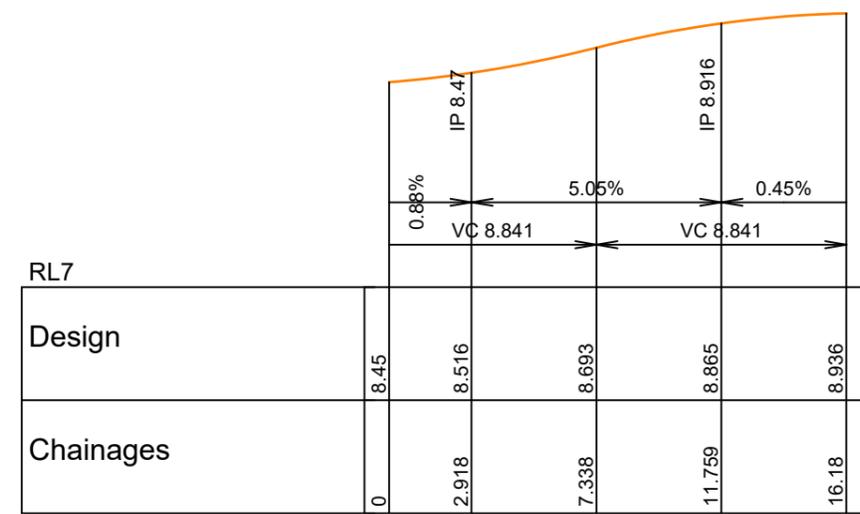
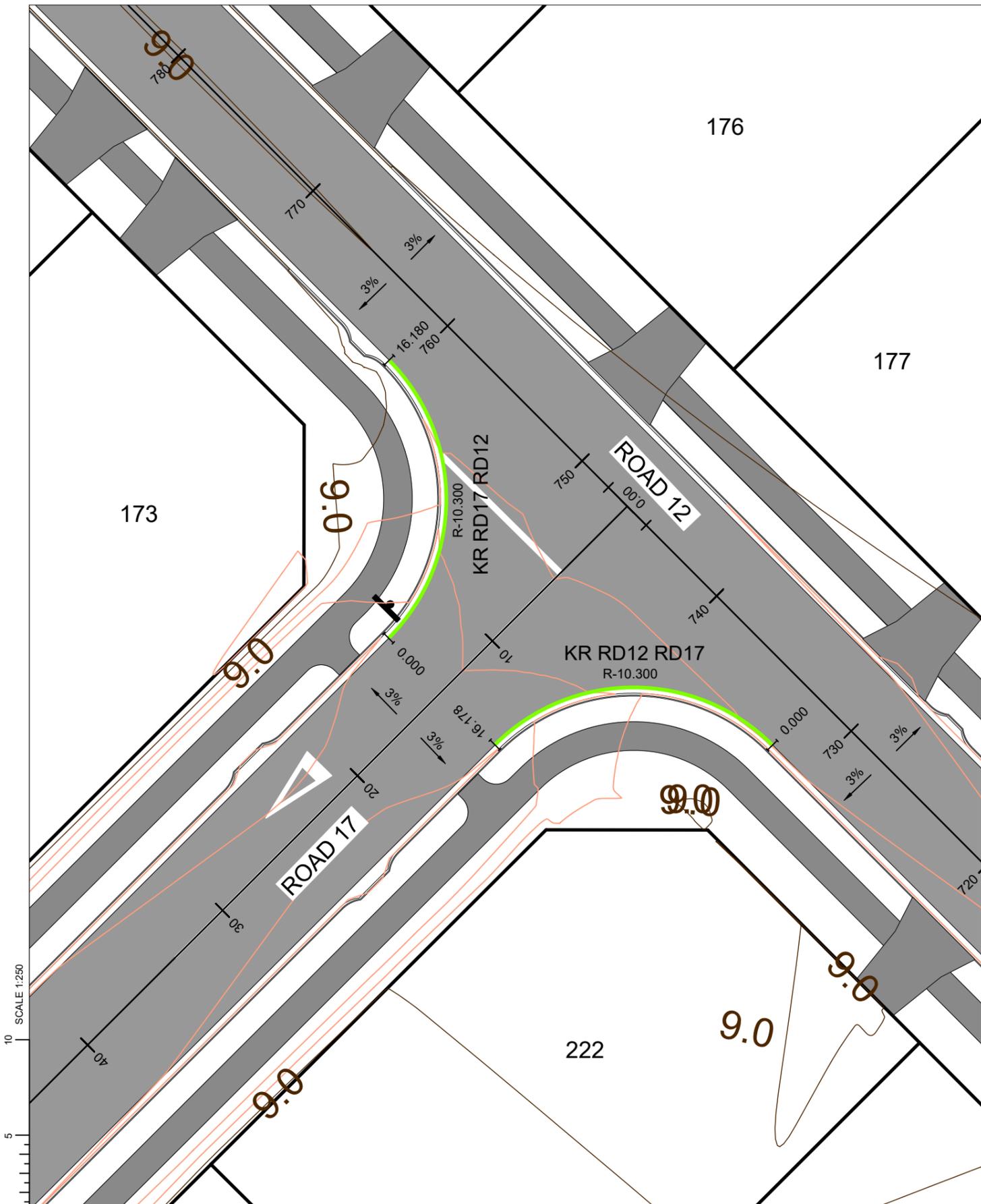


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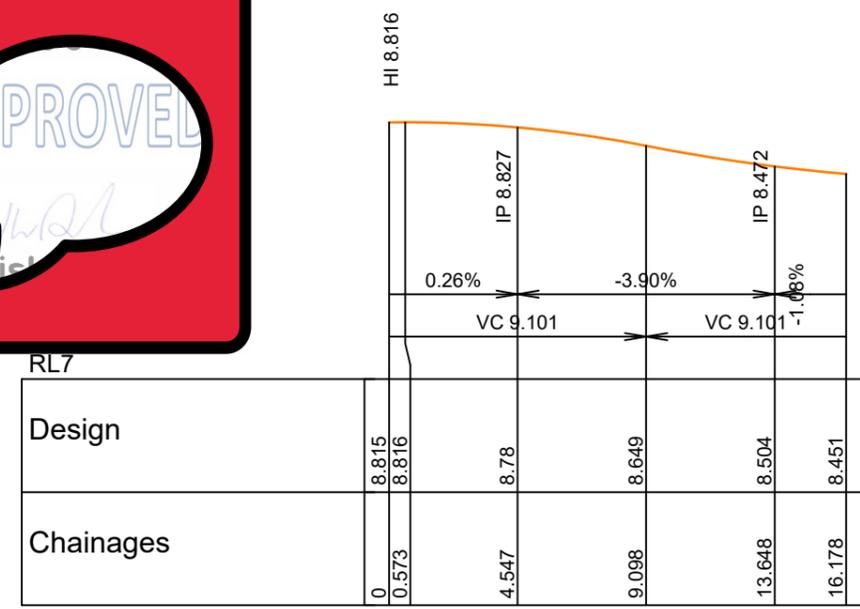
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
INTERSECTION OF ROADS 15 AND 16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS		FOR APPROVAL	
DWG NUMBER	DD566	REVISION		B			



Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR RD17 RD12



Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR RD12 RD17


PHILIP COOK
CPEng#203738

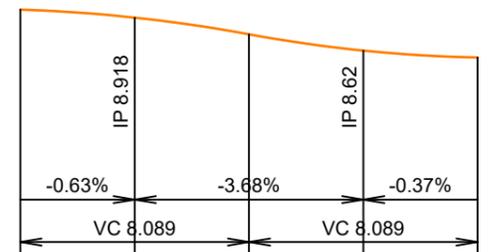
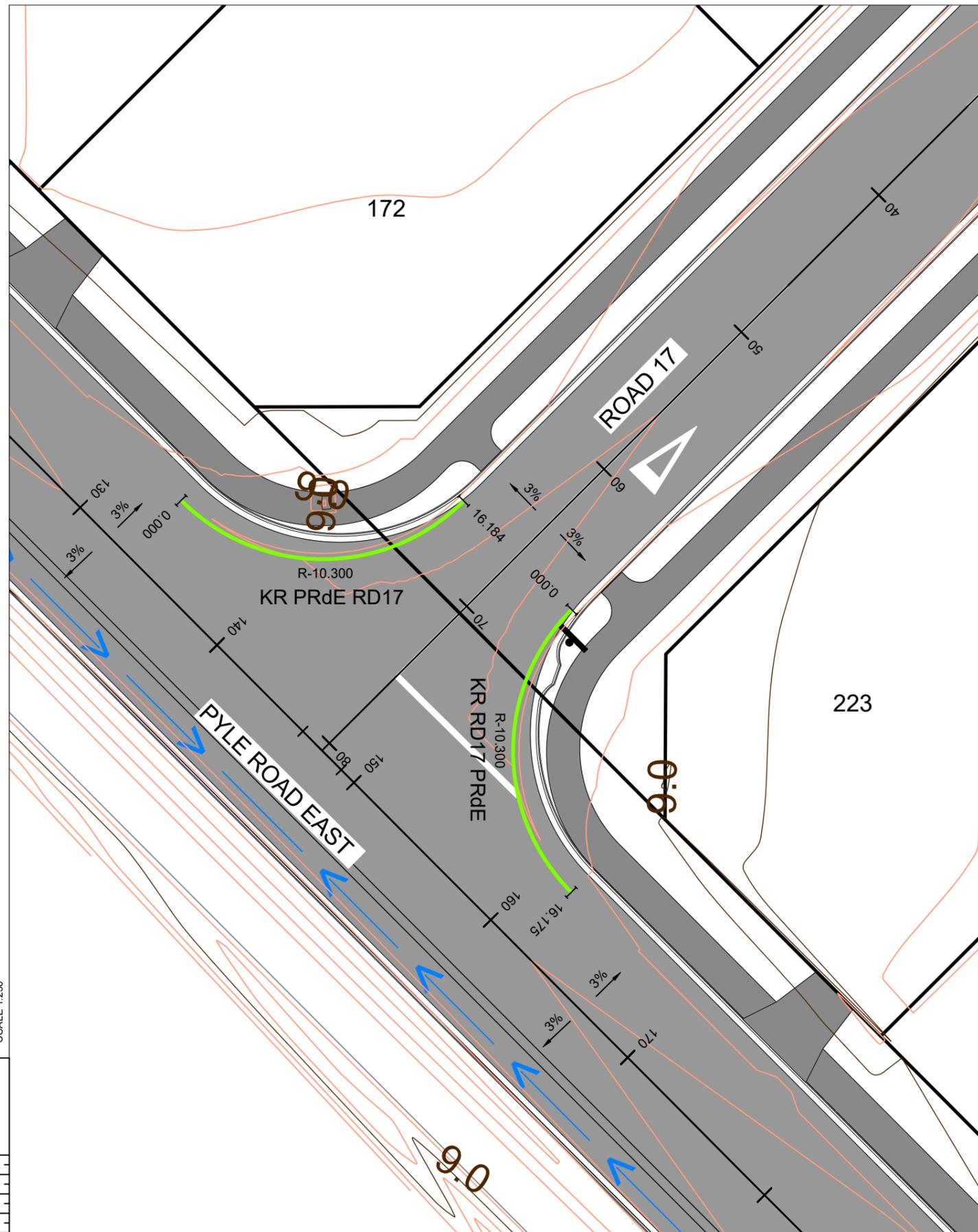
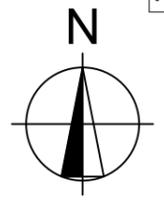
IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

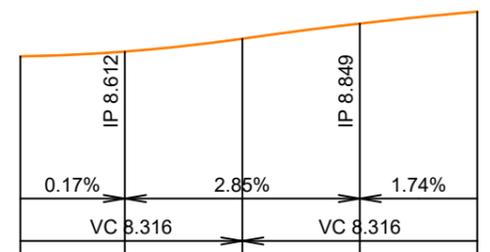
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KERB RETURNS
INTERSECTION OF ROADS 12 AND 17

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD567	REVISION	B				



RL7					
Design	8.944	8.887	8.769	8.654	8.605
Chainages	0	4.05	8.094	12.139	16.184

Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR PRdE RD17



RL7					
Design	8.606	8.64	8.73	8.838	8.922
Chainages	0	3.7	7.858	12.017	16.175

Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR RD17 PRdE


PHILIP COOK
CPeng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

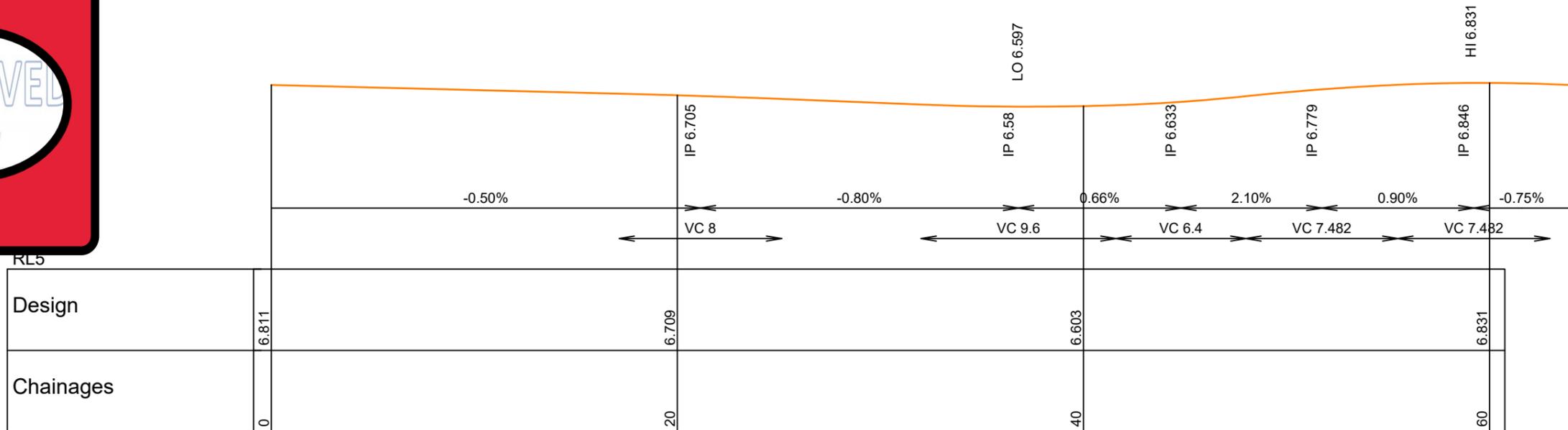
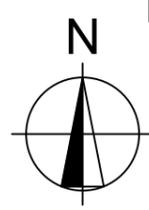


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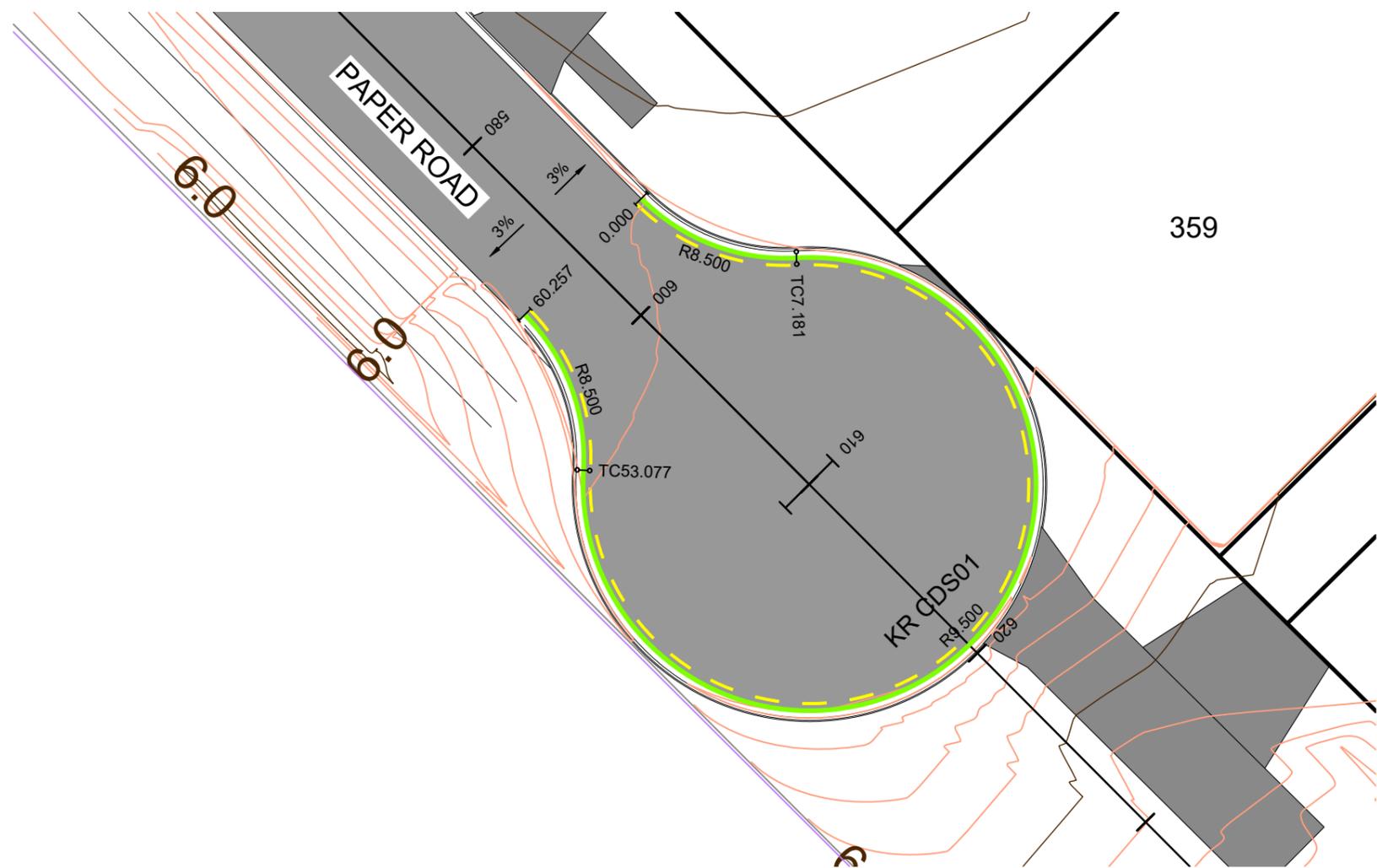
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
INTERSECTION OF ROADS 17
AND PYLE ROAD EAST

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:250 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD568	REVISION	B				



Horizontal 1:250 Vertical 1:50
LONGITUDINAL SECTION KR CDS01



IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:250


 PHILIP COOK
 CPEng#203738

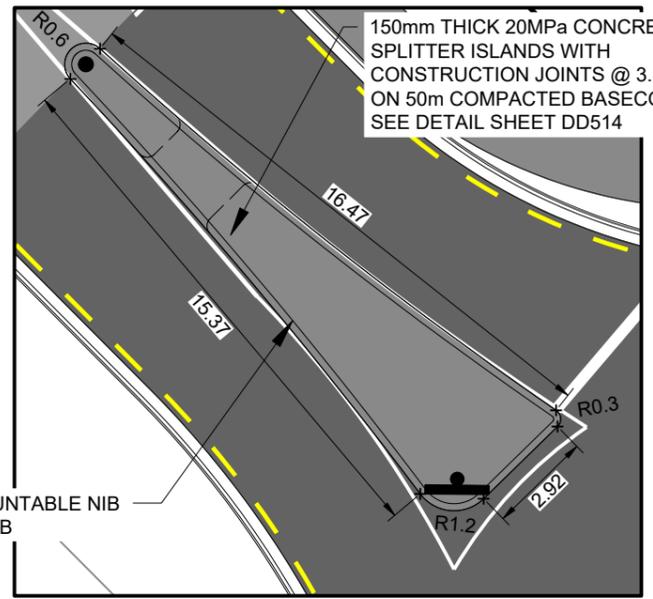
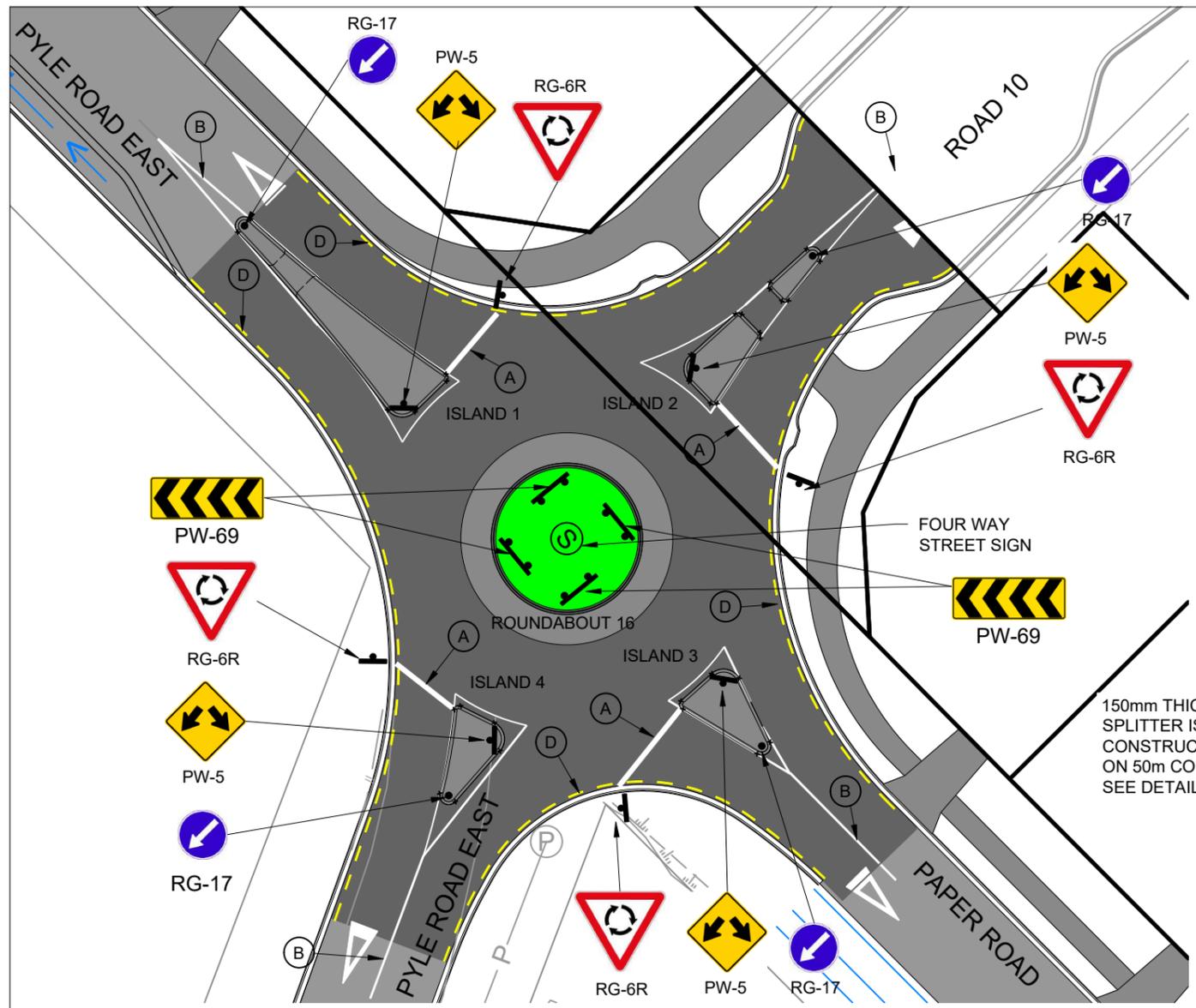


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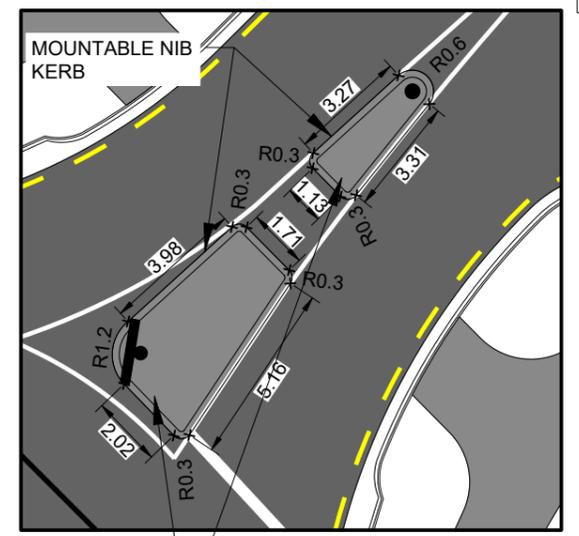
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
KERB RETURNS
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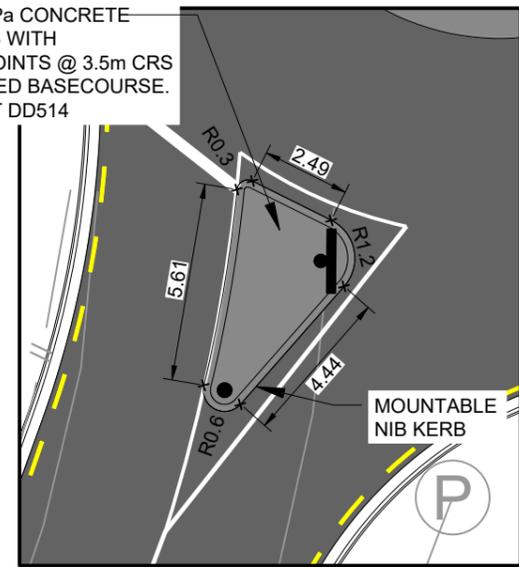
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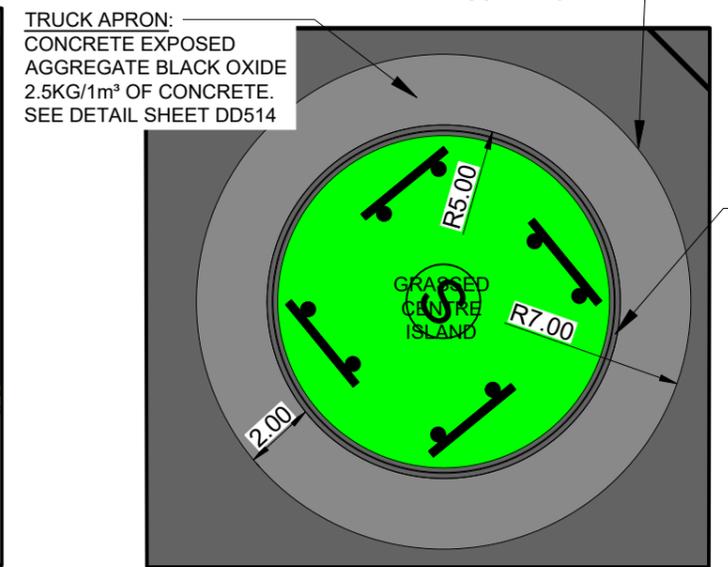
ISLAND 1
SCALE 1:200



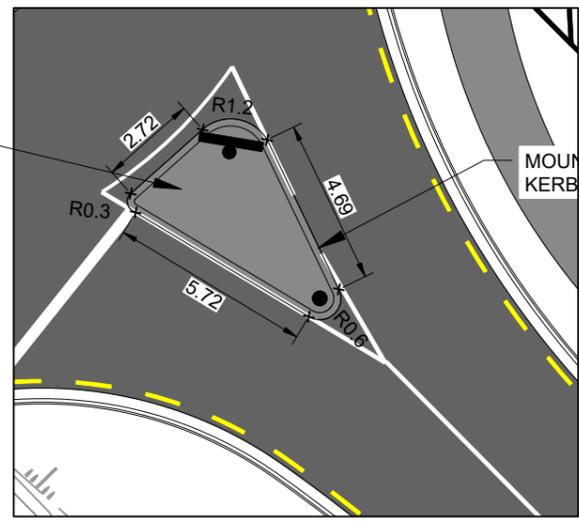
ISLAND 2
SCALE 1:200



ISLAND 4
SCALE 1:200



ROUNDABOUT ISLAND 16
SCALE 1:200



ISLAND 3
SCALE 1:200



- KEY:**
- A. LIMIT LINE: 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
 - B. CENTRELINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
 - C. EDGE LINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
 - D. NO STOPPING: 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP
- TRAFFIC SIGN AS SHOWN

- NOTES:**
1. SEE CONSTRUCTION NOTES SHEET DD002.
 2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND SHOULD MEET THE REQUIREMENTS OF THE WAKA KOTAHĪ TRAFFIC CONTROL DEVICES MANUAL (TCD) PART 1.

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:400
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5
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PHILIP COOK
CPEng#203738

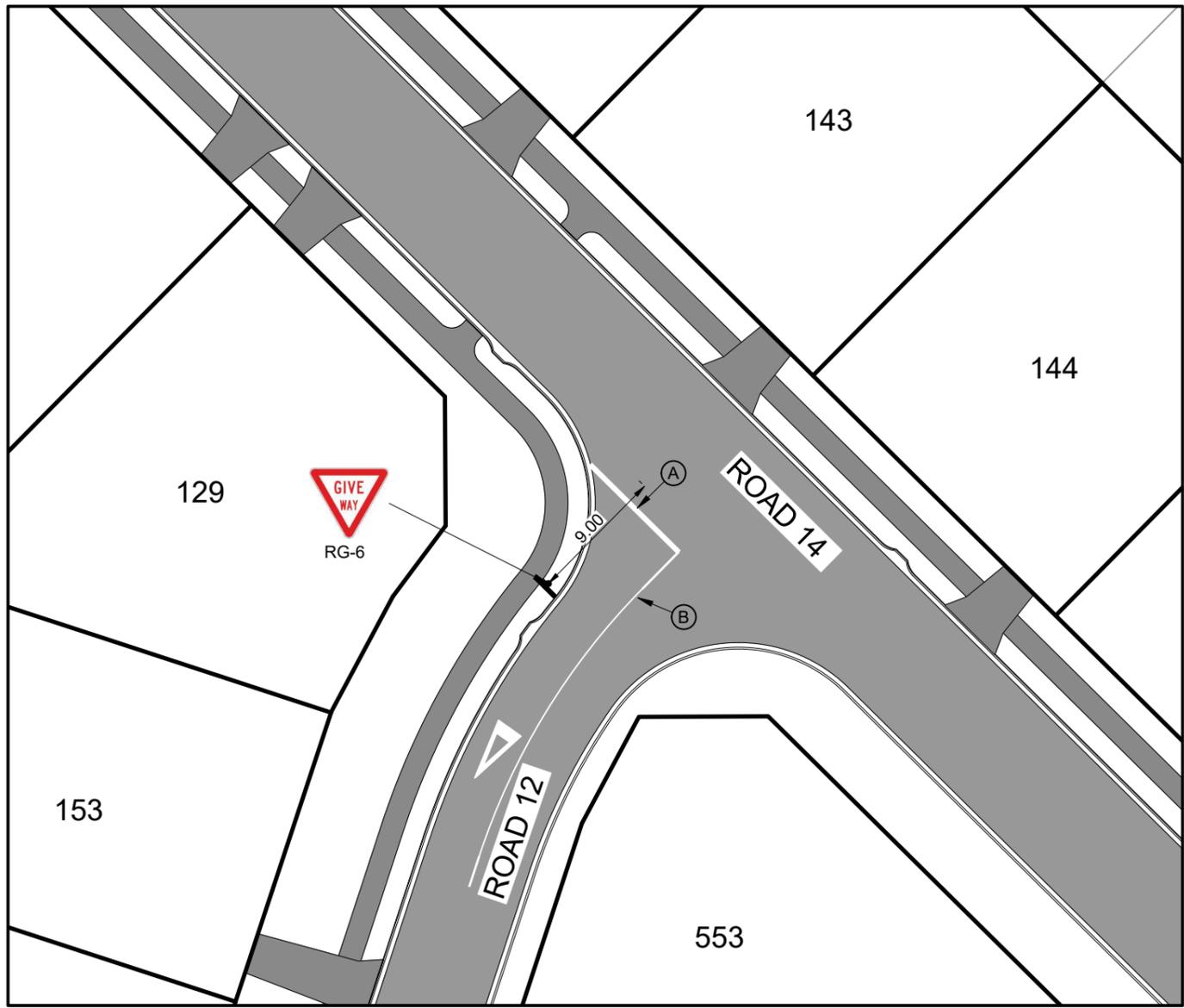


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A	1st ISSUE	07-12-22	KH PC	

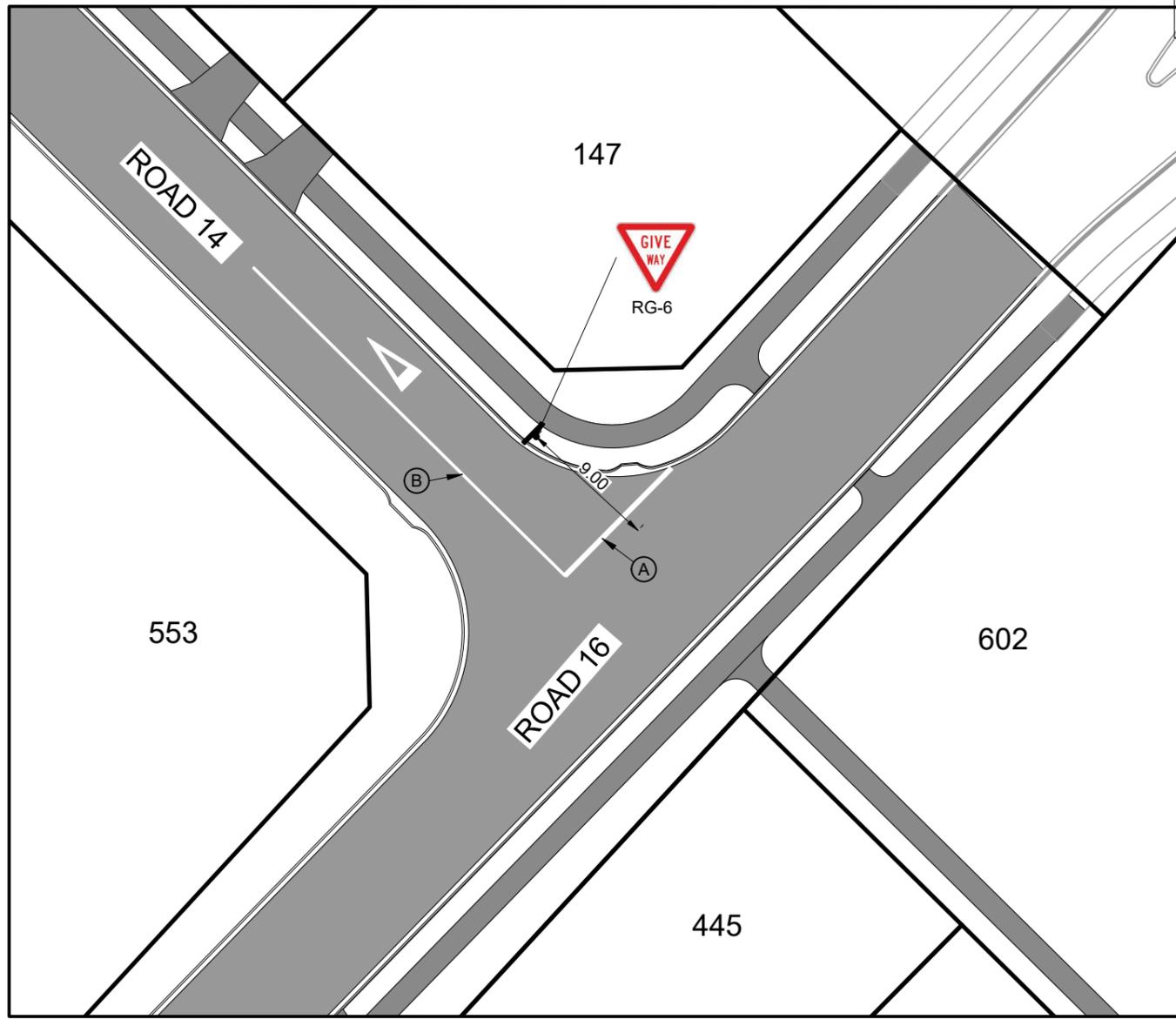
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
LINEMARKING & SIGNPOSTING PLAN
ROUNDABOUT 16

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:400 @ A3	FOR APPROVAL	
DWG NUMBER	REVISION		
DD570	B		



INTERSECTION ROADS 12 AND 14



INTERSECTION ROADS 14 AND 16

KEY:

- A. LIMIT LINE: 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- B. CENTRELINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- C. EDGE LINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- D. NO STOPPING: 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP

TRAFFIC SIGN AS SHOWN

NOTES:

1. SEE CONSTRUCTION NOTES SHEET DD002.
2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND SHOULD MEET THE REQUIREMENTS OF THE WAKA KOTAHĪ TRAFFIC CONTROL DEVICES MANUAL (TCD) PART 1.



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:400
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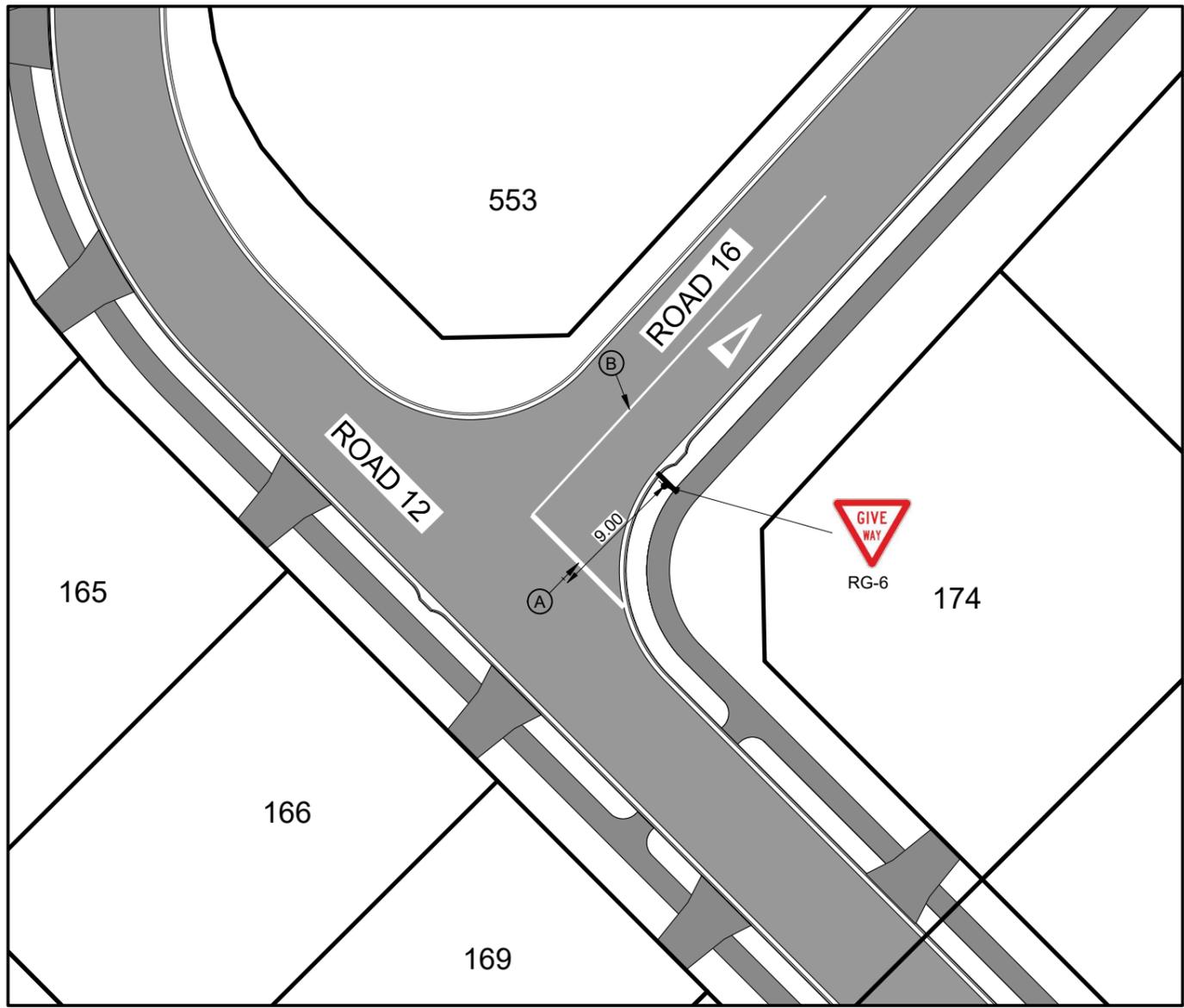


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A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

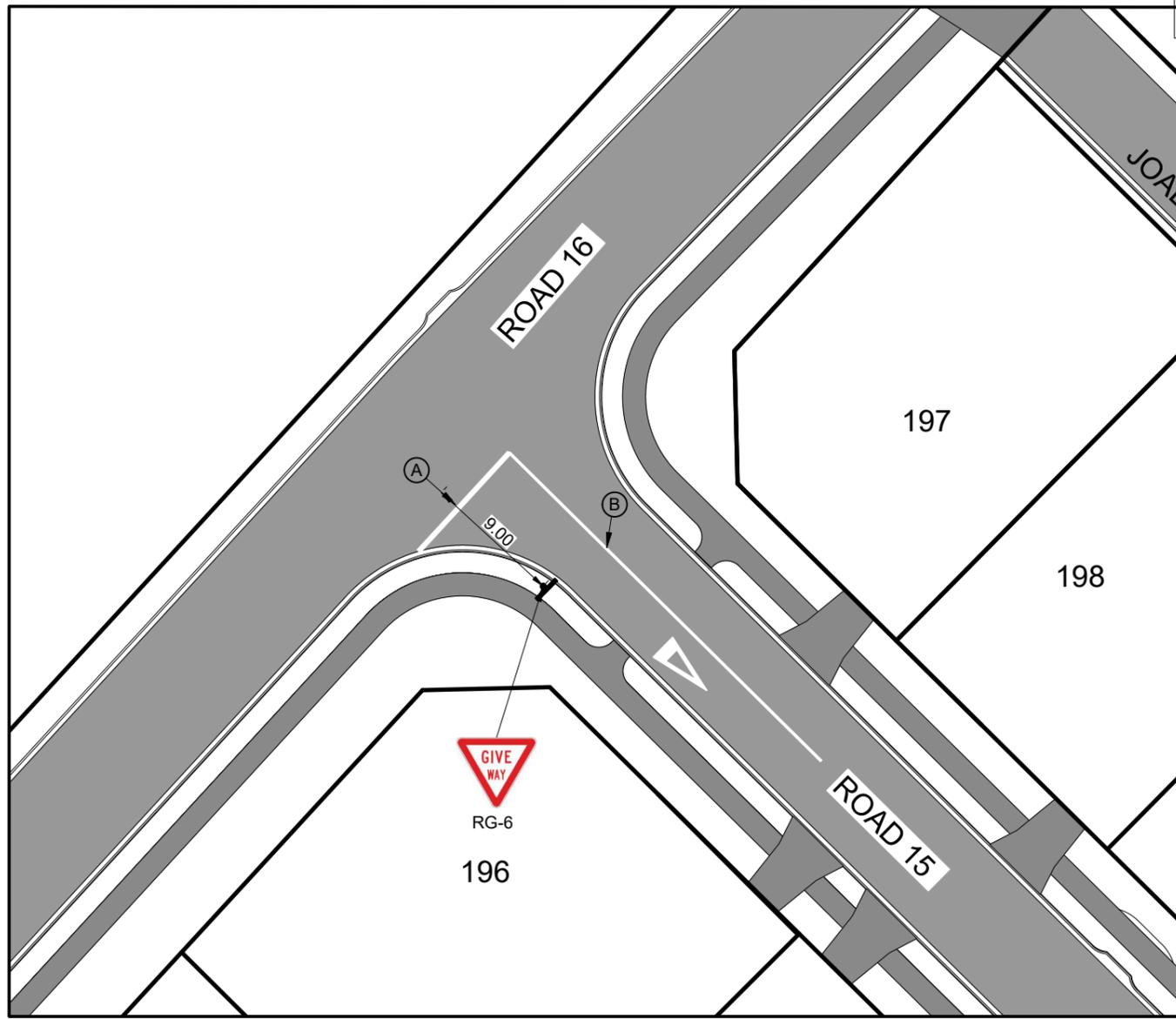
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
LINEMARKING & SIGNPOSTING PLAN
INTERSECTION OF ROADS 12 AND 14
& ROADS 14 AND 16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:400 @ A3	STATUS		FOR APPROVAL	
DWG NUMBER	DD571	REVISION		B			



INTERSECTION ROADS 12 AND 16



INTERSECTION ROADS 15 AND 16

KEY:

- A. **LIMIT LINE:** 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- B. **CENTRELINE:** 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- C. **EDGE LINE:** 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- D. **NO STOPPING:** 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP

TRAFFIC SIGN AS SHOWN

NOTES:

1. SEE CONSTRUCTION NOTES SHEET DD002.
2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND SHOULD MEET THE REQUIREMENTS OF THE WAKA KOTAHI TRAFFIC CONTROL DEVICES MANUAL (TCD) PART 1.



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
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SCALE 1:400
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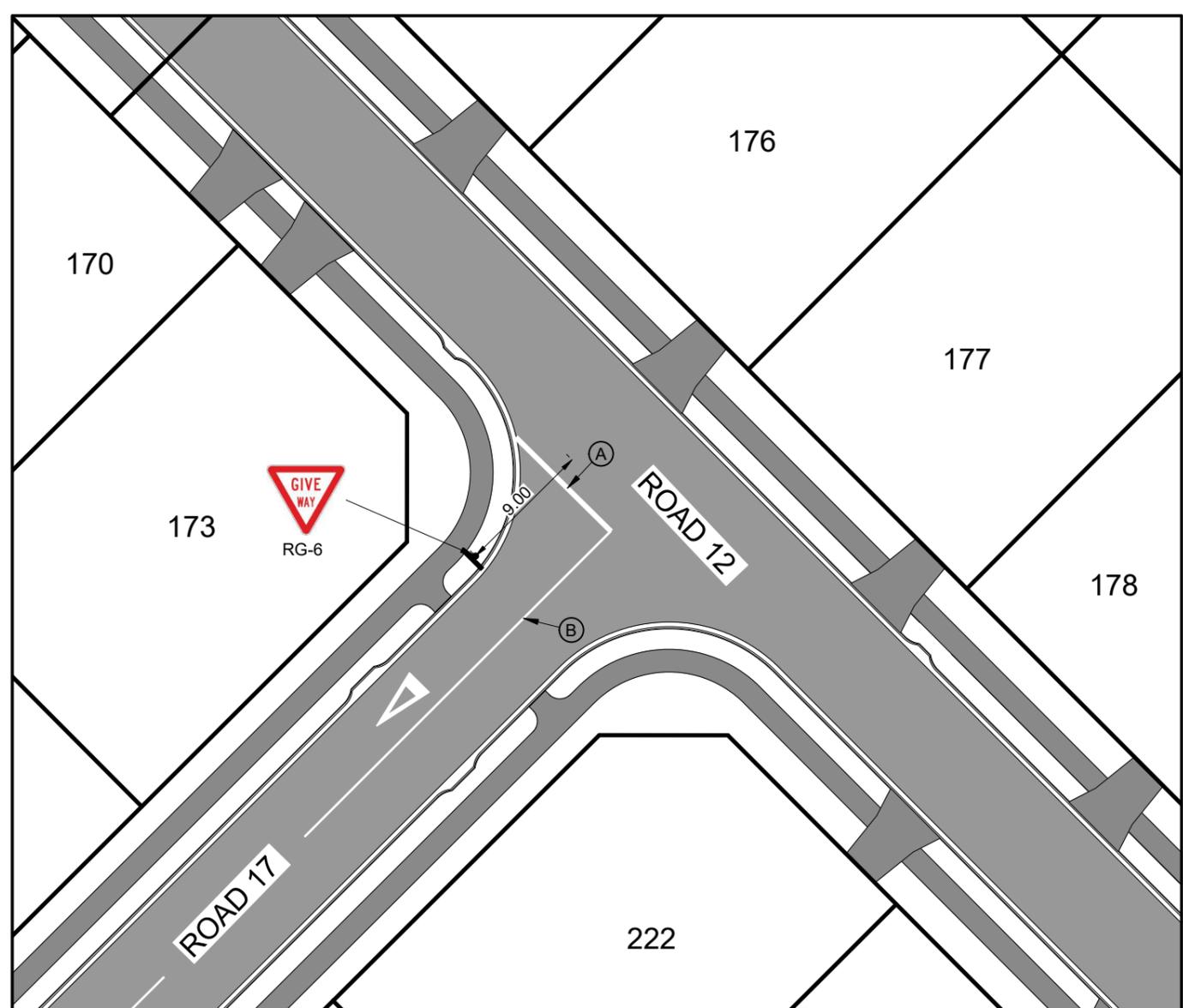


REV.	REVISION DETAILS	DATE	DRAWN	APP.
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B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC

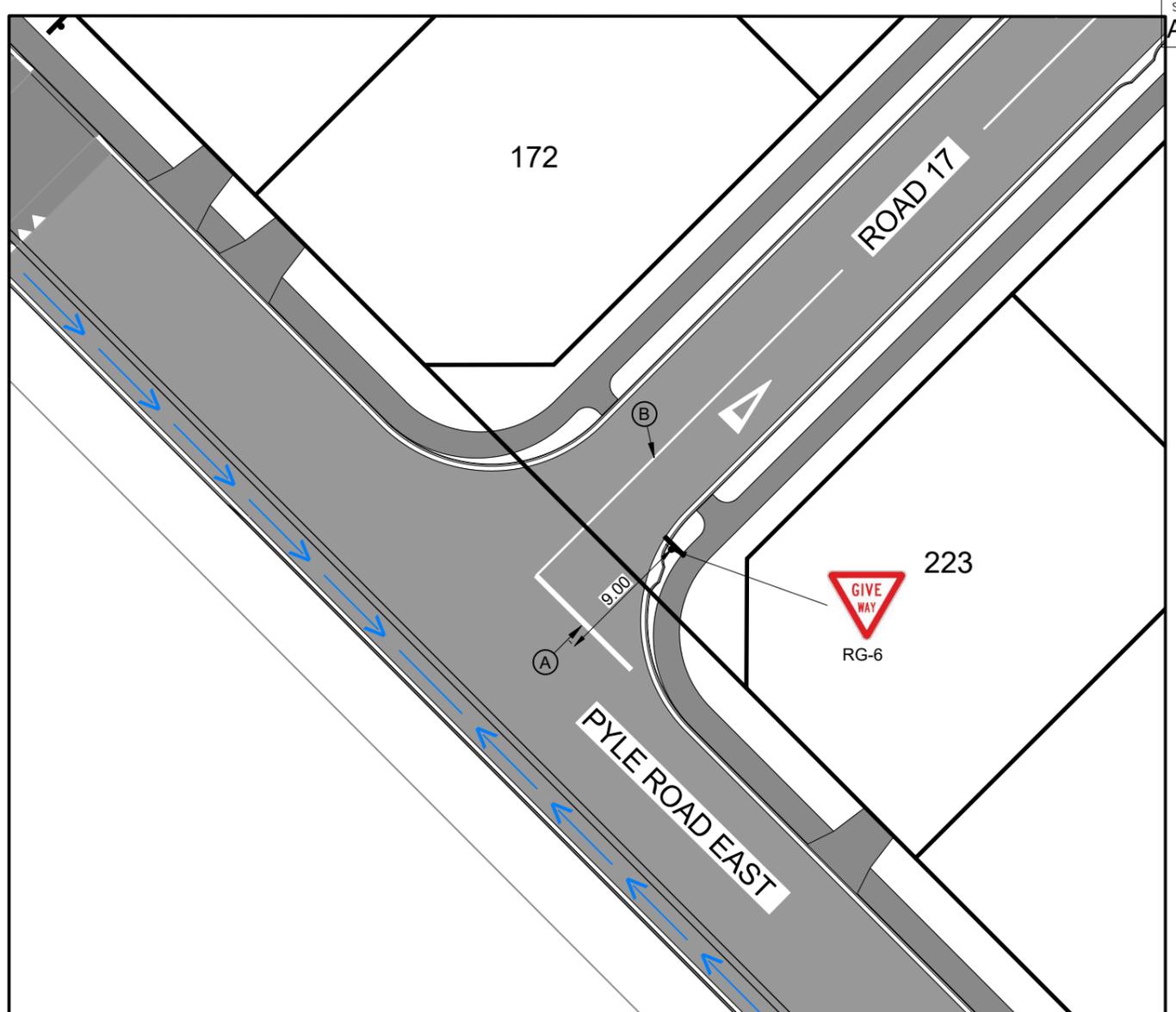
PROJECT DETAILS	
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	

TITLE
LINEMARKING & SIGNPOSTING PLAN INTERSECTION OF ROADS 12 AND 16 & ROADS 15 AND 16

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:400 @ A3	FOR APPROVAL	
DWG NUMBER	REVISION		
DD572	B		



INTERSECTION ROADS 12 AND 17



INTERSECTION ROADS 17 AND PYLE ROAD EAST

KEY:

- A. LIMIT LINE: 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- B. CENTRELINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- C. EDGE LINE: 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- D. NO STOPPING: 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP

TRAFFIC SIGN AS SHOWN

NOTES:

1. SEE CONSTRUCTION NOTES SHEET DD002.
2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND SHOULD MEET THE REQUIREMENTS OF THE WAKA KOTAHI TRAFFIC CONTROL DEVICES MANUAL (TCD) PART 1.



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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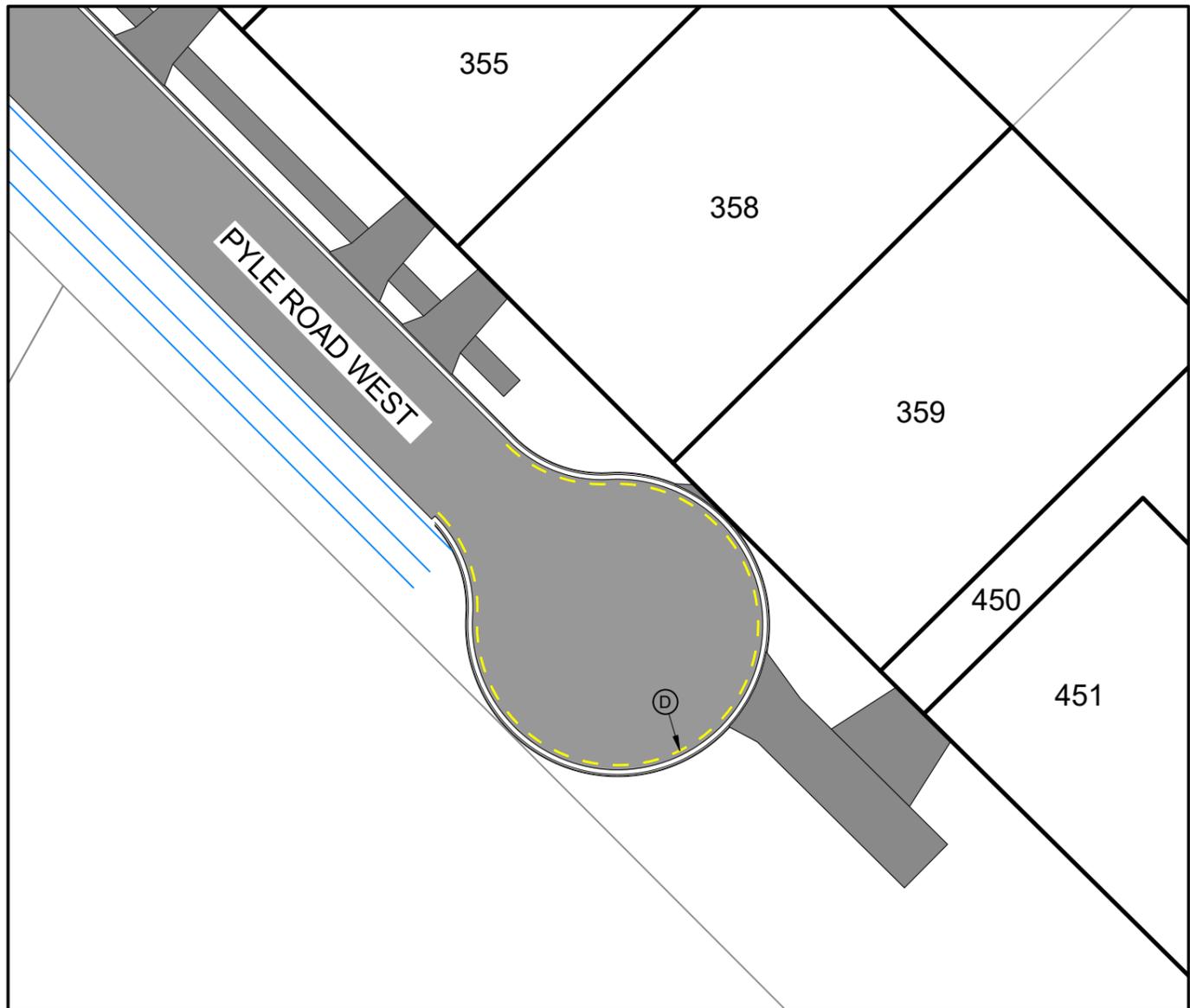


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A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

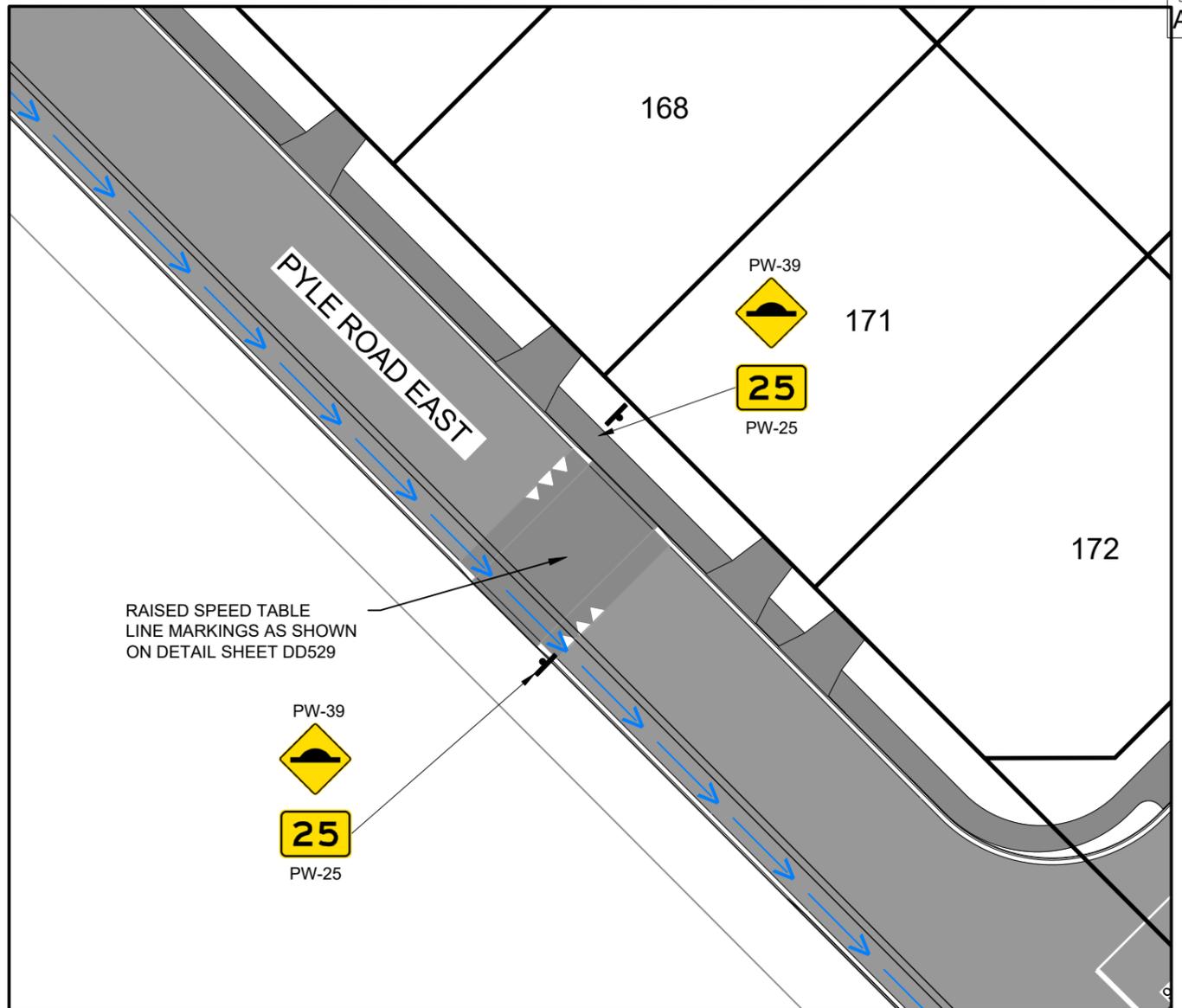
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
LINEMARKING & SIGNPOSTING PLAN
INTERSECTION OF ROADS 12 AND 17
& ROAD 17 AND PYLE ROAD EAST

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:400 @ A3		STATUS FOR APPROVAL
DWG NUMBER DD573			REVISION B



TURNING HEAD



RAISED SPEED TABLE ON PYLE ROAD EAST

KEY:

- A. **LIMIT LINE:** 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- B. **CENTRELINE:** 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- C. **EDGE LINE:** 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- D. **NO STOPPING:** 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP

TRAFFIC SIGN AS SHOWN

NOTES:

1. SEE CONSTRUCTION NOTES SHEET DD002.
2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND SHOULD MEET THE REQUIREMENTS OF THE WAKA KOTAHĪ TRAFFIC CONTROL DEVICES MANUAL (TCD) PART 1.



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

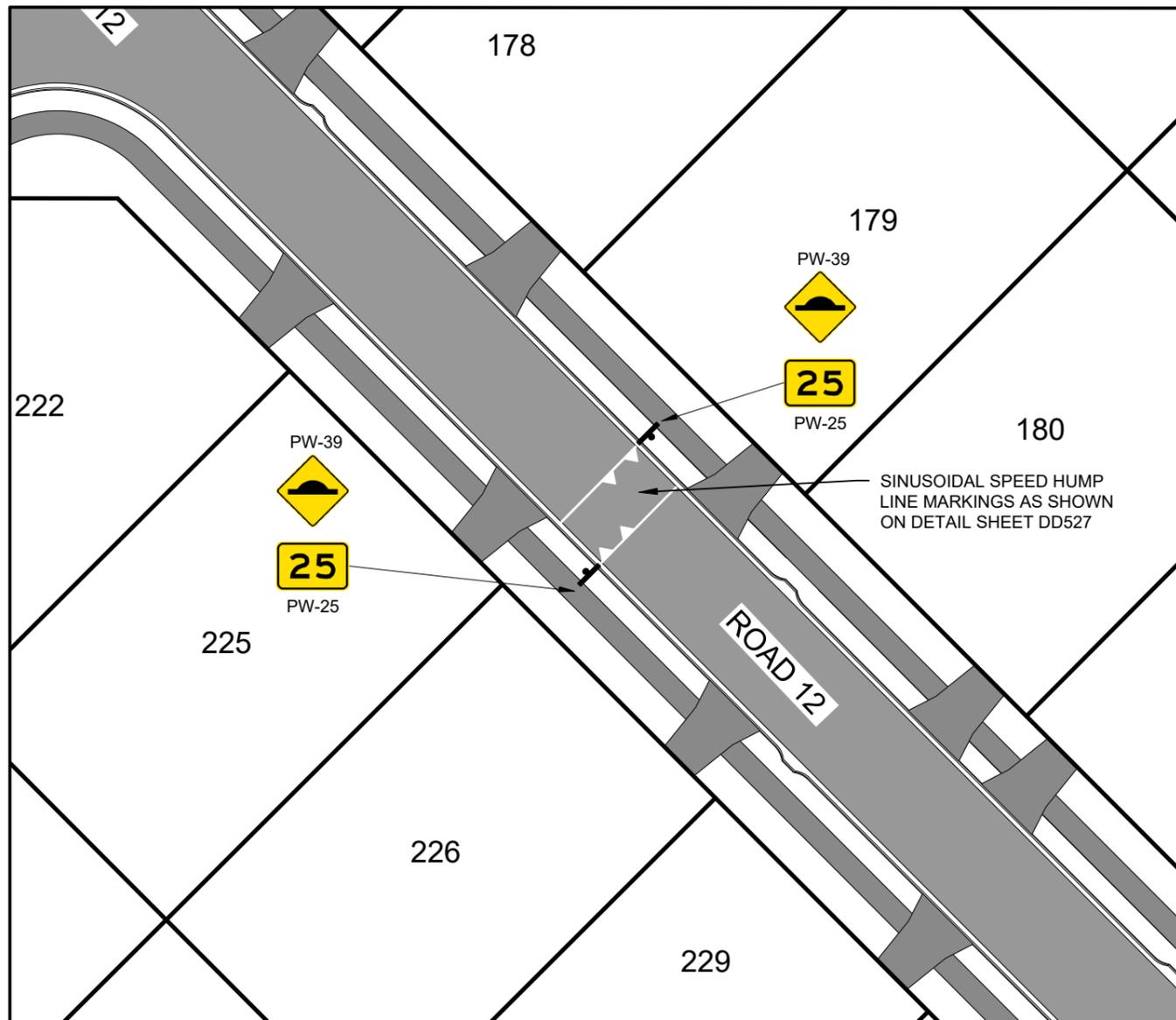
SCALE 1:400
15
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5
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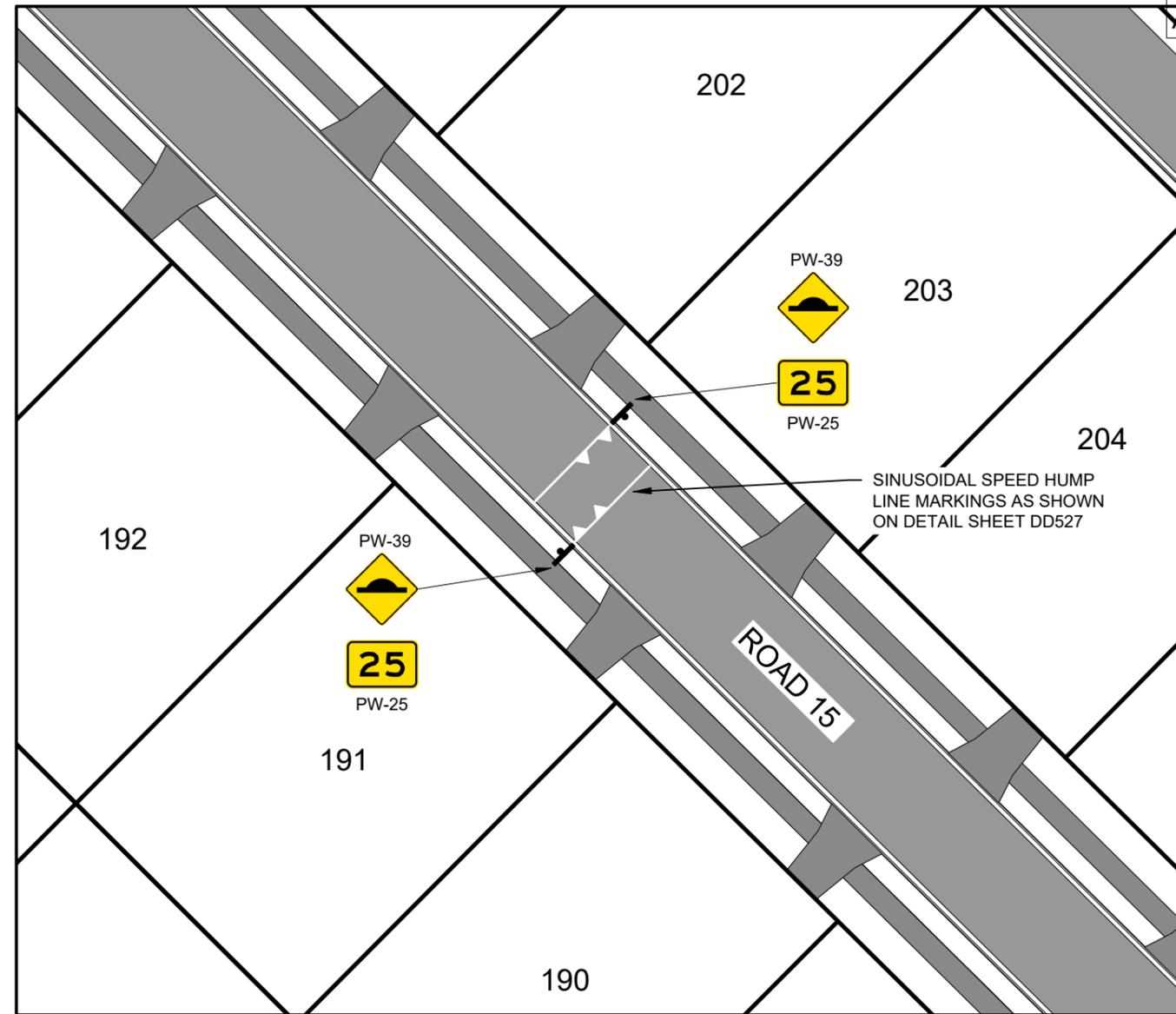
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C				
B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC

PROJECT DETAILS	
WFH PROPERTIES LIMITED	TITLE
THE LANDING - STAGES 8A, 8B & 9	LINEMARKING & SIGNPOSTING PLAN
ONE TREE POINT	TURNING HEAD ON CUL-DE-SAC &
RUAKAKA	RAISED SPEED TABLE ON PYLE ROAD EAST

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:400 @ A3	FOR APPROVAL	
DWG NUMBER	REVISION		
DD574	B		



SINUSOIDAL SPEED HUMPS ON ROAD 12



SINUSOIDAL SPEED HUMPS ON ROAD 15

KEY:

- A. **LIMIT LINE:** 300mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- B. **CENTRELINE:** 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- C. **EDGE LINE:** 100mm WIDE REFLECTORISED WHITE CONTINUOUS LINE.
- D. **NO STOPPING:** 100mm WIDE REFLECTORISED YELLOW 1m STRIPE, 1m GAP

TRAFFIC SIGN AS SHOWN

NOTES:

1. SEE CONSTRUCTION NOTES SHEET DD002.
2. LINE MARKINGS AND TRAFFIC SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH CURRENT NZTA MOTSAM MANUALS AND SHOULD MEET THE REQUIREMENTS OF THE WAKA KOTAHĪ TRAFFIC CONTROL DEVICES MANUAL (TCD) PART 1.



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

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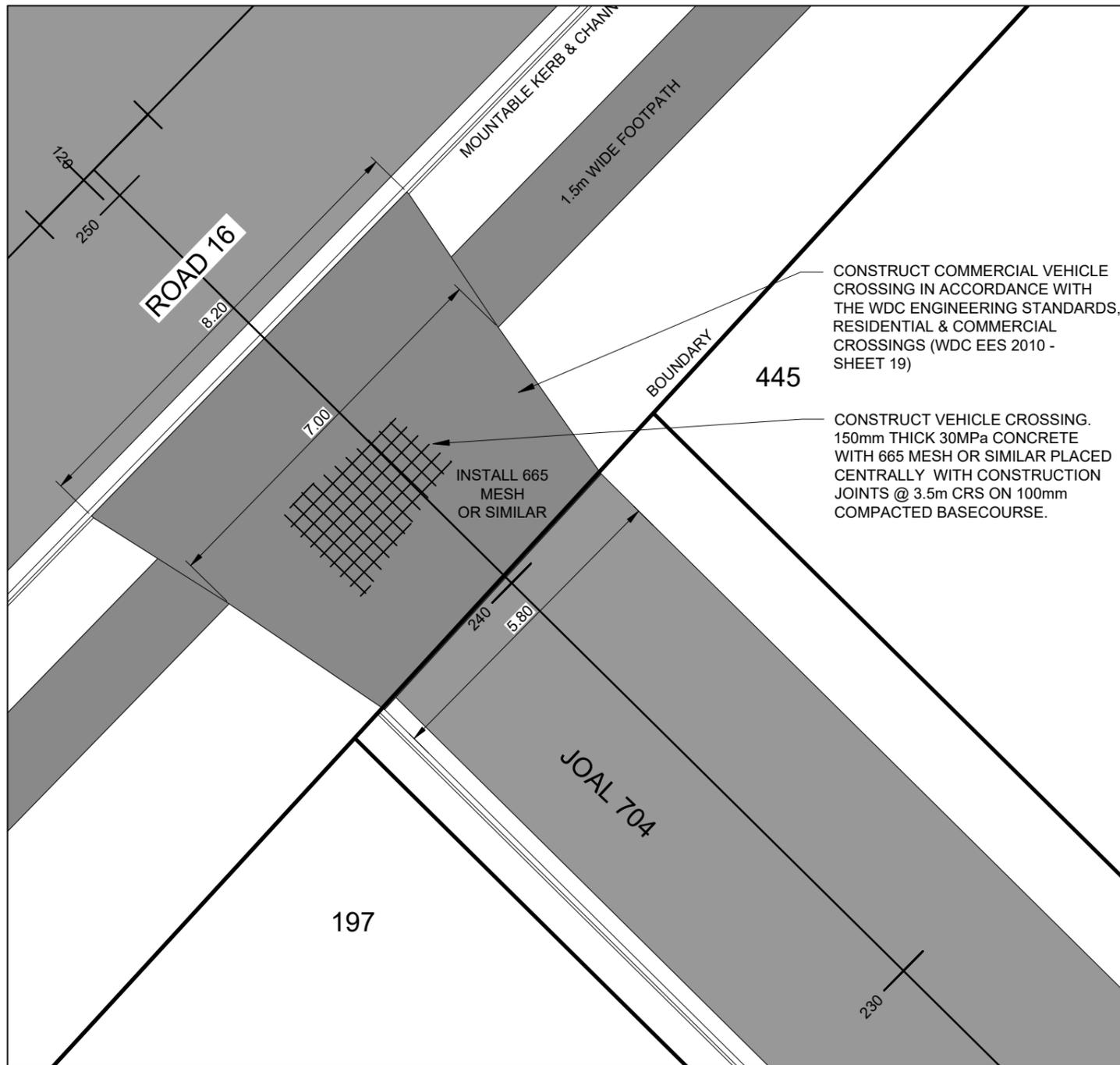


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B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

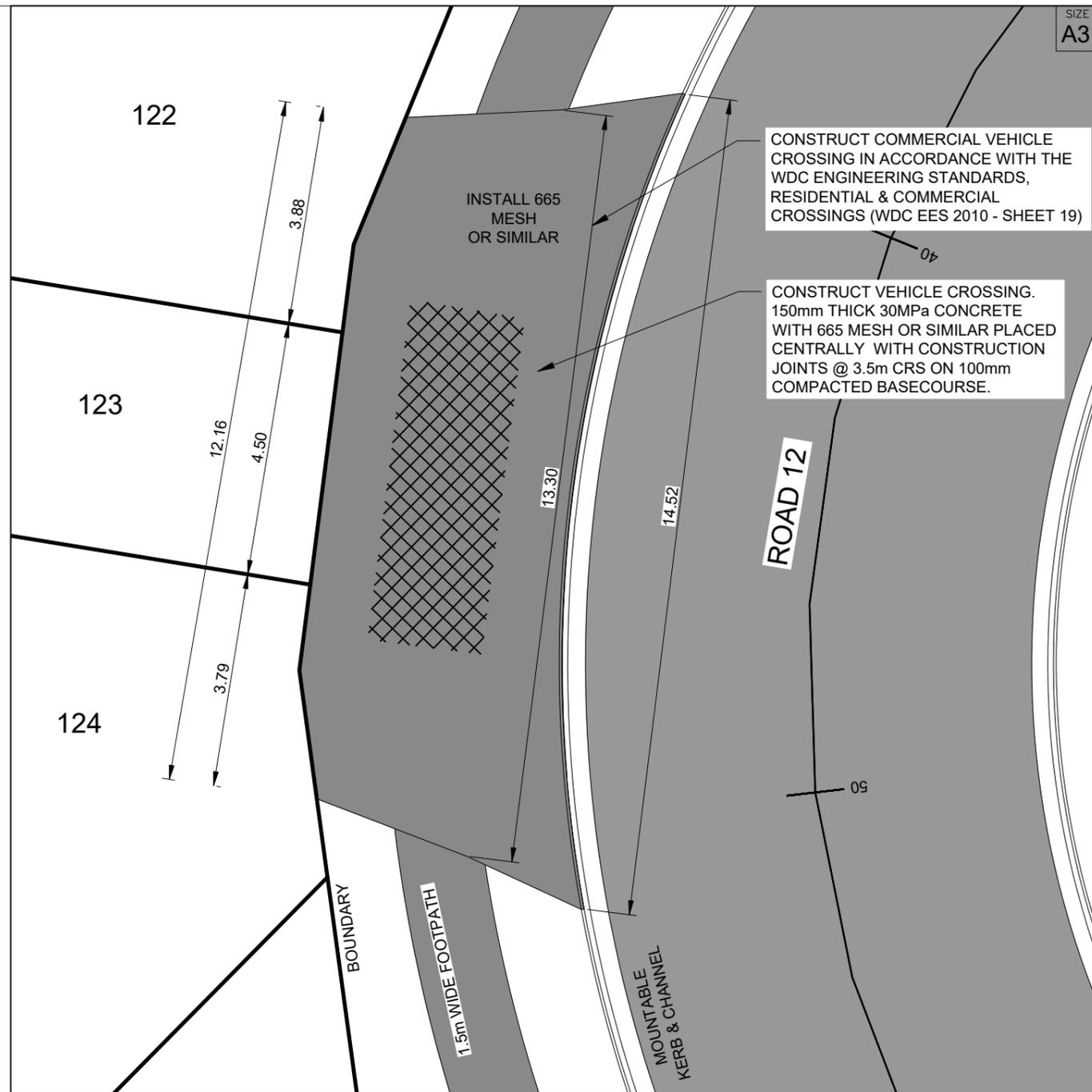
TITLE
LINEMARKING & SIGNPOSTING PLAN
& SINUSOIDAL SPEED HUMPS
ON ROADS 12 & 15

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:400 @ A3		STATUS FOR APPROVAL		
DWG NUMBER	DD575				REVISION B		



JOAL 704 - VEHICLE CROSSING

SCALE 1:100



VEHICLE CROSSING - LOTS 122, 123 & 124

SCALE 1:100



IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

4 SCALE 1:100
2
0

PHILIP COOK
 CPEng#203738

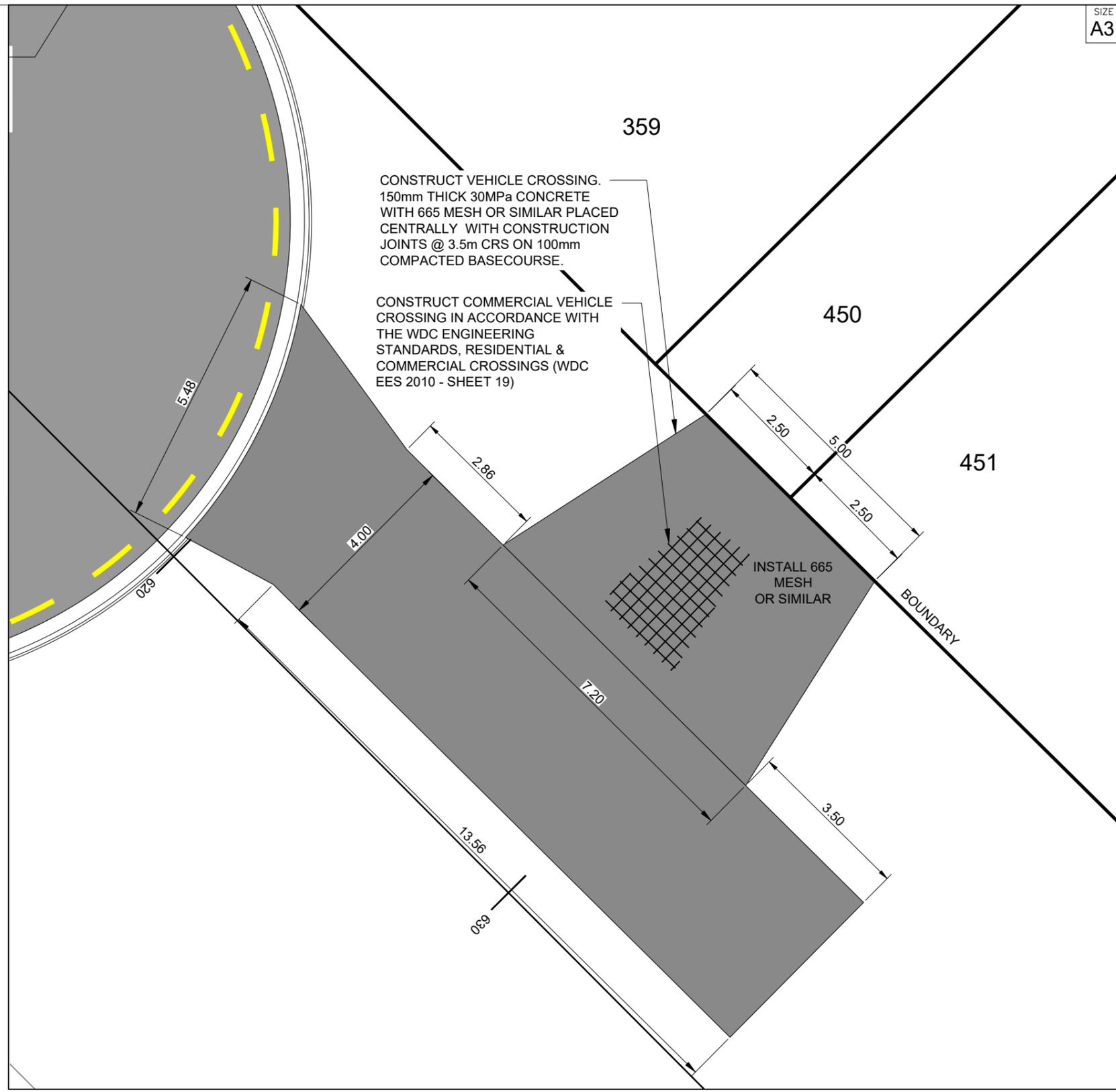
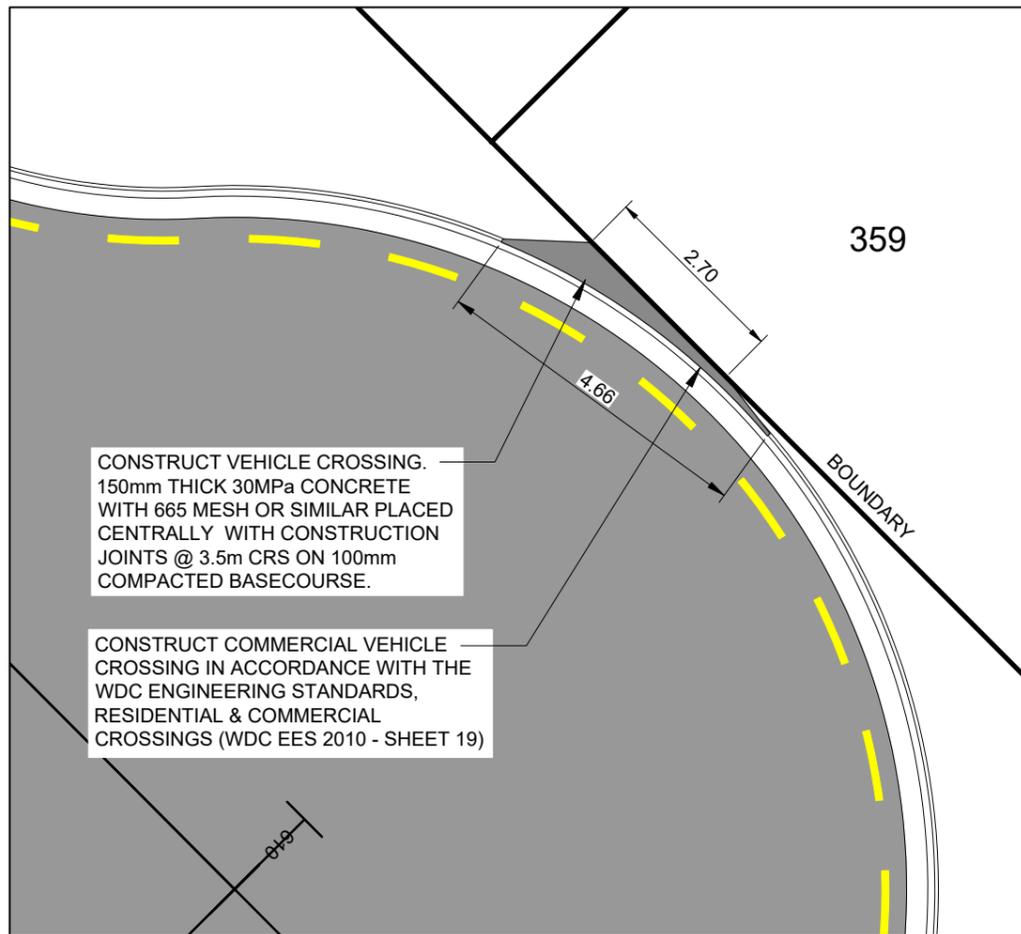


REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
VEHICLE CROSSING
 JOAL 704 AND LOTS 122, 123 & 124

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:100 @ A3	FOR APPROVAL	
DWG NUMBER	REVISION		
DD580	B		



CONSTRUCT VEHICLE CROSSING.
150mm THICK 30MPa CONCRETE
WITH 665 MESH OR SIMILAR PLACED
CENTRALLY WITH CONSTRUCTION
JOINTS @ 3.5m CRS ON 100mm
COMPACTED BASECOURSE.

CONSTRUCT COMMERCIAL VEHICLE
CROSSING IN ACCORDANCE WITH THE
WDC ENGINEERING STANDARDS,
RESIDENTIAL & COMMERCIAL
CROSSINGS (WDC EES 2010 - SHEET 19)

CONSTRUCT VEHICLE CROSSING.
150mm THICK 30MPa CONCRETE
WITH 665 MESH OR SIMILAR PLACED
CENTRALLY WITH CONSTRUCTION
JOINTS @ 3.5m CRS ON 100mm
COMPACTED BASECOURSE.

CONSTRUCT COMMERCIAL VEHICLE
CROSSING IN ACCORDANCE WITH
THE WDC ENGINEERING
STANDARDS, RESIDENTIAL &
COMMERCIAL CROSSINGS (WDC
EES 2010 - SHEET 19)

INSTALL 665
MESH
OR SIMILAR

VEHICLE CROSSING - LOT 359

SCALE 1:100

VEHICLE CROSSING - LOTS 450 & 451

SCALE 1:100



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND
INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



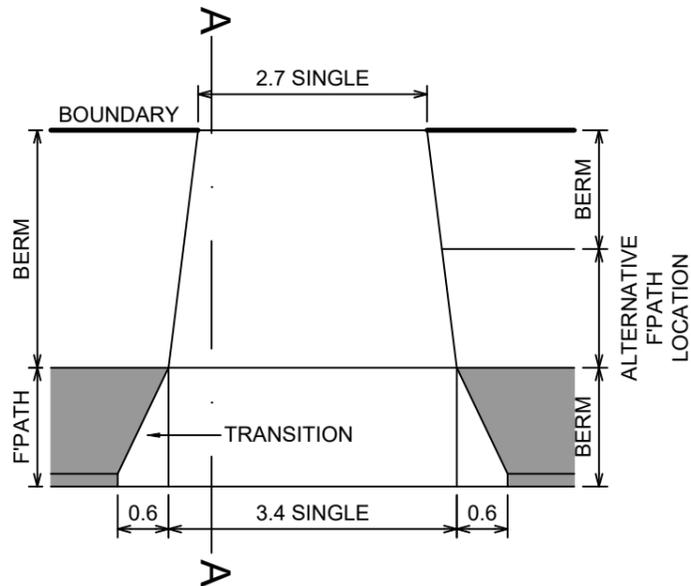
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C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS	TITLE
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	VEHICLE CROSSING LOTS 359, 450 & 451

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO 14333-009	SCALE 1:100 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD581			REVISION B

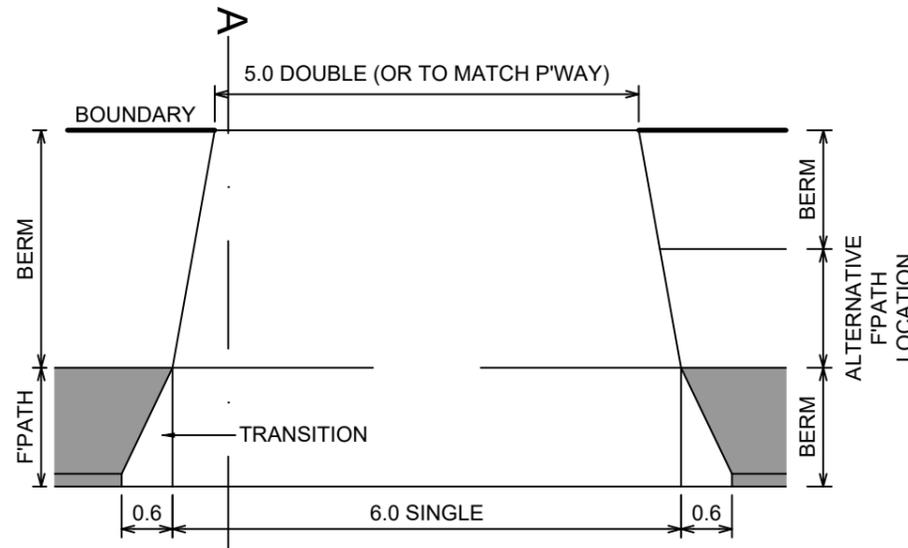
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0 2 4 SCALE 1:100



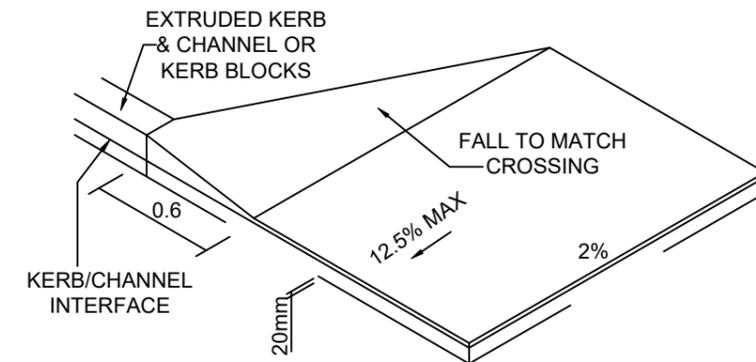
SINGLE VEHICLE CROSSING PLAN

RESIDENTIAL CROSSINGS - SHEET 18
WDC EES 2010 - NOT TO SCALE



DOUBLE VEHICLE CROSSING PLAN

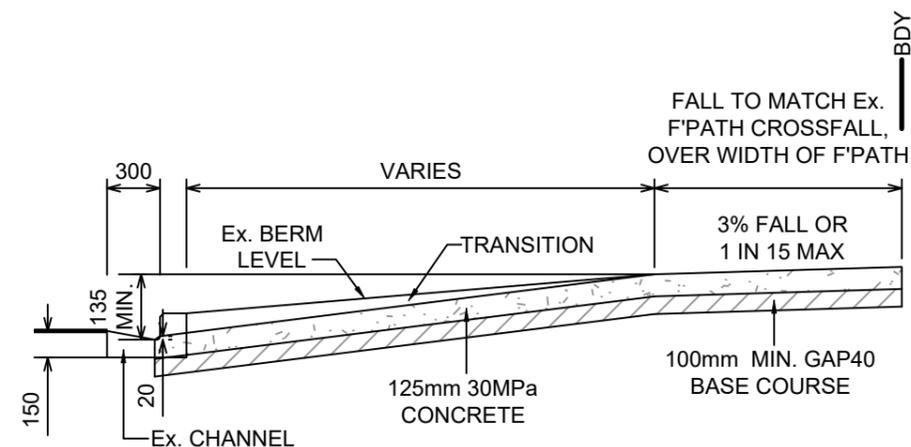
RESIDENTIAL CROSSINGS - SHEET 18
WDC EES 2010 - NOT TO SCALE



KERB TRANSITION DETAIL

RESIDENTIAL CROSSINGS - SHEET 18
WDC EES 2010 - NOT TO SCALE

1. ALL CONCRETE TO BE 30MPa STRENGTH AT 28 DAYS.
2. CROSSINGS TO BE CONSTRUCTED TO MATCH EXISTING FOOTPATH AND CHANNEL LEVELS AND BE GRADED TO GIVE SUFFICIENT CLEARANCE TO THE UNDERSIDE OF ALL VEHICLES.
3. THE ALTERNATIVE CHANNEL CROSSING DETAILED ON SHEET 20 MAY ONLY BE USED WITH SPECIFIC APPROVAL. IT IS FOR USE ONLY WHERE THICK OVERLAY OF THE EXISTING SEAL PRECLUDES THE STANDARD OPTION.
4. IF NO FOOTPATH, ALLOWANCE SHALL BE MADE FOR SUCH WITH A 3% CROSSFALL TO THE KERB.
5. KERB TRANSITIONS TO BE CONSTRUCTED OF SIMILAR MATERIALS TO THE ADJACENT KERB OR CAST INSITU CONCRETE. SEE SHEET 12 FOR DETAILS.
6. WHERE THE FOOTPATH OR ADJACENT PROPERTY LEVEL IS BELOW THE CHANNEL LEVEL, RAMP THE CROSSING UP FROM THE CHANNEL TO CONTROL SURFACE WATER WHILE MAINTAINING VEHICLE CLEARANCE. A FREE BOARD OF 200mm ABOVE THE CHANNEL IS REQUIRED TO CONTAIN STORMWATER WITHIN THE ROAD.
7. GRADIENT OF CROSSING NOT TO EXCEED 12.5% (1 IN 8)
8. CROSSINGS FOR ALL PRIVATEWAYS SHALL BE COMMERCIAL GRADE (PER SHEET 19)
9. EDGES OF FOOTPATH AND BACK OF CHANNEL TO BE SAWCUT.
10. ALL CROSSINGS REQUIRE COUNCIL INSPECTION PRIOR TO POURING CONCRETE.
11. IF THE EDGE OF THE CROSSING IS WITHIN 1m OF A CRACK OR JOINT IN AN EXISTING FOOTPATH THEN THAT SECTION OF FOOTPATH IS TO BE REPLACED.
12. COMMERCIAL AND INDUSTRIAL CHANNELS TO BE REINFORCED WITH AN EXTENSION OF THE 668 MESH.
13. WHERE A STREET SUMP IS LOCATED WITHIN THE PROPOSED CROSSING, THE SUMP SHALL BE RELOCATED TO THE SIDE OF THE CROSSING AND BE RECONNECTED TO THE COUNCIL STORMWATER SYSTEM.
14. REFER TO SHEET 16 FOR VEHICLE CROSSINGS OVER A DRAINAGE SWALE.
15. STORMWATER KERB CONNECTIONS ARE GENERALLY NOT PERMITTED (SEE SECTION 4.8.1.5).
16. SPLAY WIDTH MAY NEED TO BE INCREASED IN SOME CIRCUMSTANCES TO ACCOMMODATE AN 11.5m RIGID TRUCK.
17. FOR COMMERCIAL CROSSINGS, PROVIDE A 2m STRIP OF HOT LAID ASPHALTIC CONCRETE OVER FULL WIDTH INCLUDING SPLAYS.



CROSSING SECTION A-A

RESIDENTIAL CROSSINGS - SHEET 18 WDC EES 2010 - NOT TO SCALE

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
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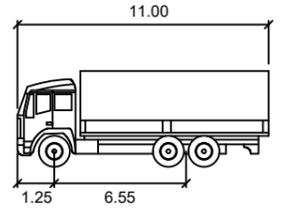
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B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS		DRAWN APP.

PROJECT DETAILS	TITLE
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	VEHICLE CROSSING DETAILS

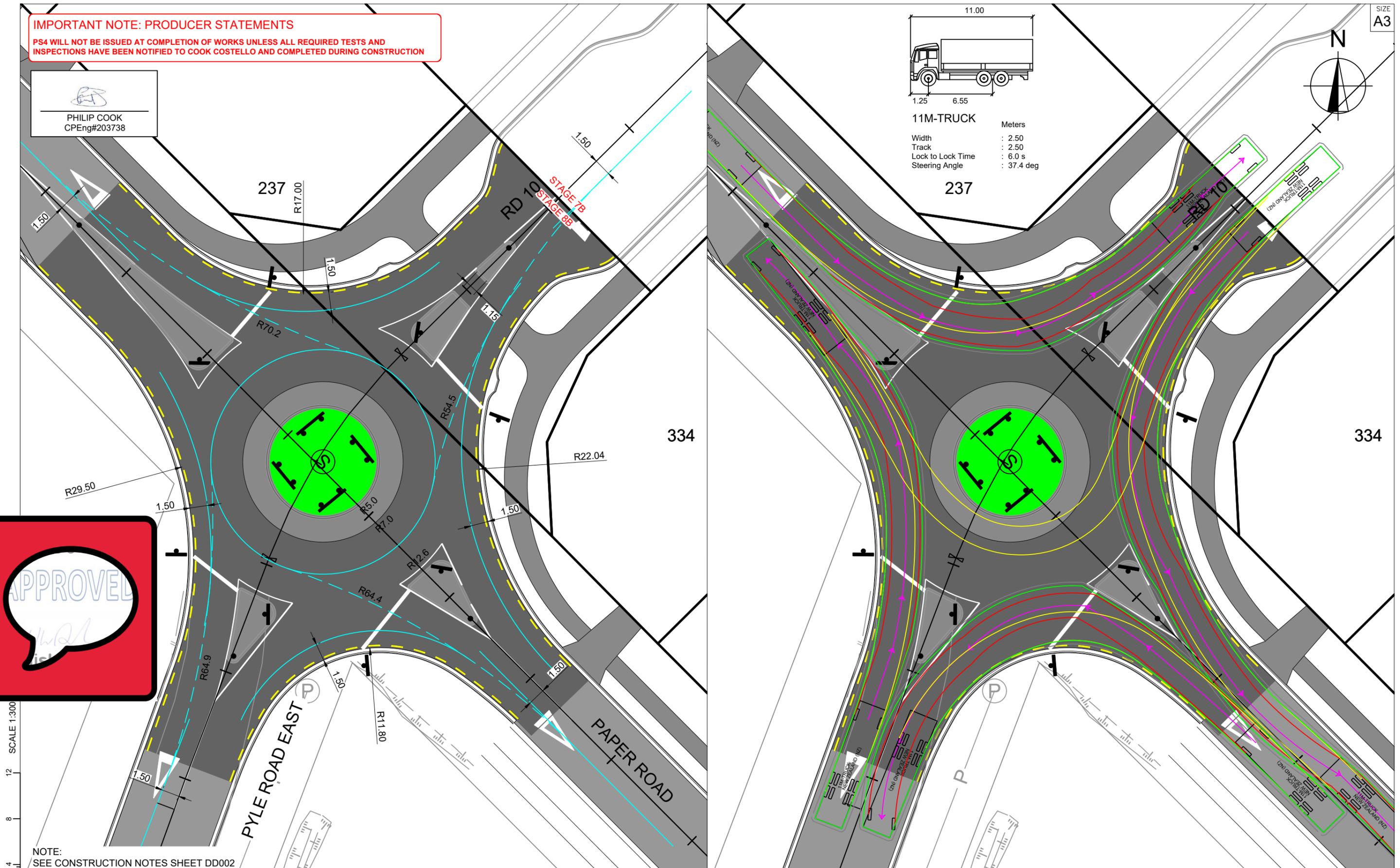
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07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	NTS @ A3	FOR APPROVAL	
DWG NUMBER	REVISION		
DD583	B		

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738



11M-TRUCK
Meters
Width : 2.50
Track : 2.50
Lock to Lock Time : 6.0 s
Steering Angle : 37.4 deg



SCALE 1:300
0 4 8 12

NOTE:
SEE CONSTRUCTION NOTES SHEET DD002



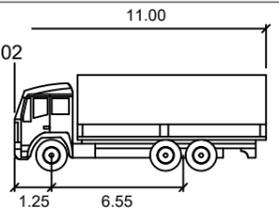
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B	PLAN SET UPDATED	17-03-23	
		KH PC	
A	1st ISSUE	07-12-22	
		KH PC	
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE TRACKING CURVES
ROUNDBOUT 16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:300 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD584	REVISION	B				

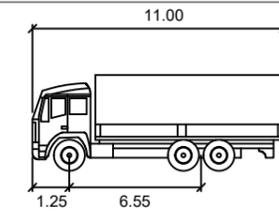
NOTE:
SEE CONSTRUCTION NOTES SHEET DD002



11M-TRUCK
Meters
Width : 2.50
Track : 2.50
Lock to Lock Time : 6.0 s
Steering Angle : 37.4 deg

237

334



11M-TRUCK
Meters
Width : 2.50
Track : 2.50
Lock to Lock Time : 6.0 s
Steering Angle : 37.4 deg

237

SIZE
A3



SCALE 1:300

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS	
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	

TITLE	
VEHICLE TRACKING CURVES ROUNDBOUT 16	

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:300 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD585	REVISION	B				

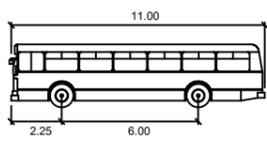
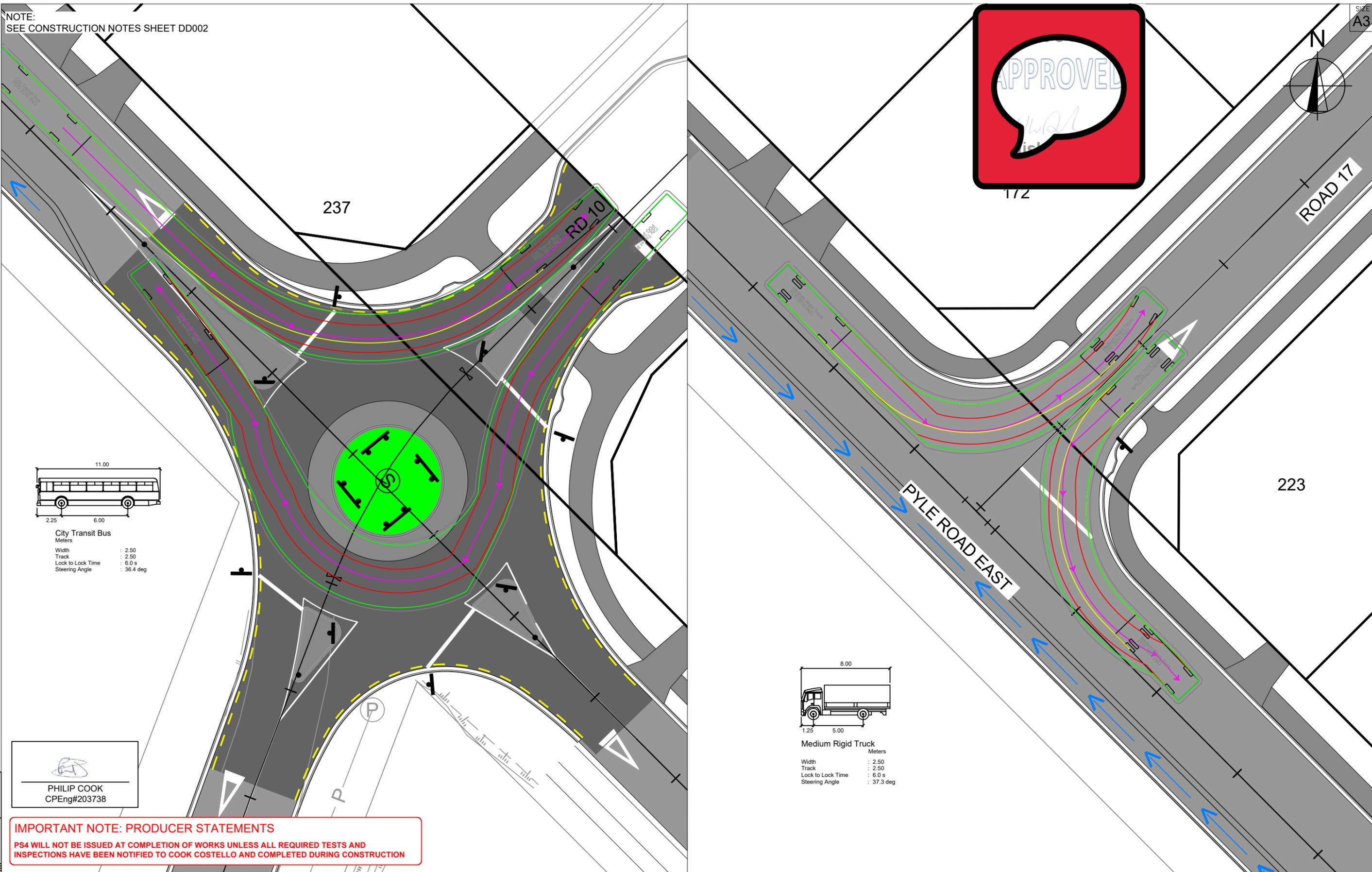
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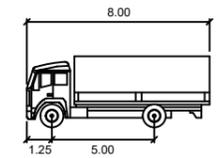
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NOTE:
SEE CONSTRUCTION NOTES SHEET DD002

SIZE
A3



City Transit Bus
Meters
Width : 2.50
Track : 2.50
Lock to Lock Time : 6.0 s
Steering Angle : 36.4 deg



Medium Rigid Truck
Meters
Width : 2.50
Track : 2.50
Lock to Lock Time : 6.0 s
Steering Angle : 37.3 deg


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	
		KH PC	
A	1st ISSUE	07-12-22	
		KH PC	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE TRACKING CURVES
ROUNDABOUT 16
& ROAD 17 AND PYLE ROAD EAST

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:300 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD586	REVISION	B				

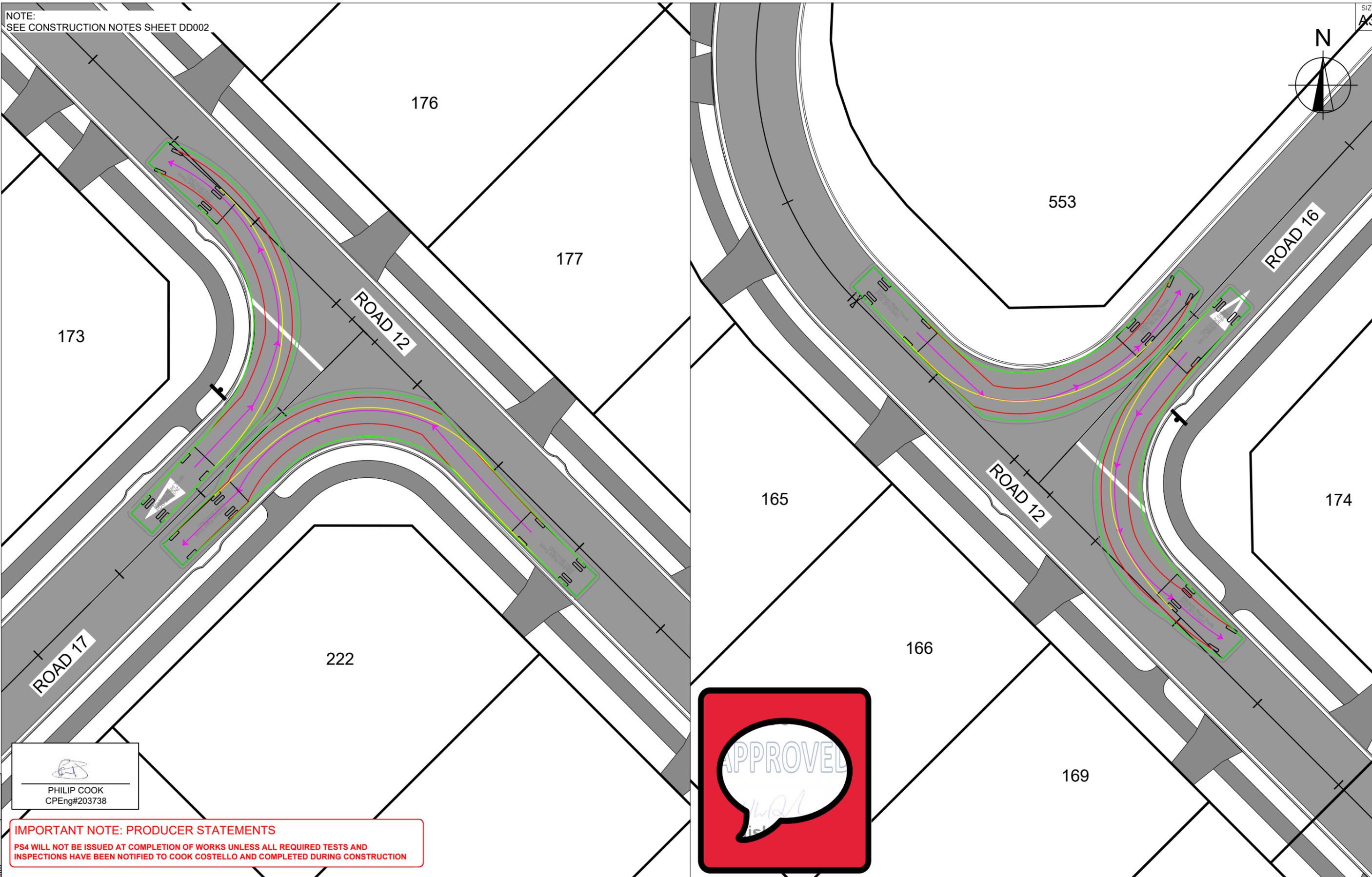
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NOTE:
SEE CONSTRUCTION NOTES SHEET DD002

SIZE
A3



SCALE 1:300
12
8
4
0


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	
		KH	PC
A	1st ISSUE	07-12-22	
		KH	PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE TRACKING CURVES
INTERSECTION OF ROADS 12 AND 17
& ROADS 12 AND 16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:300 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD587	REVISION	B				

SCALE 1:300
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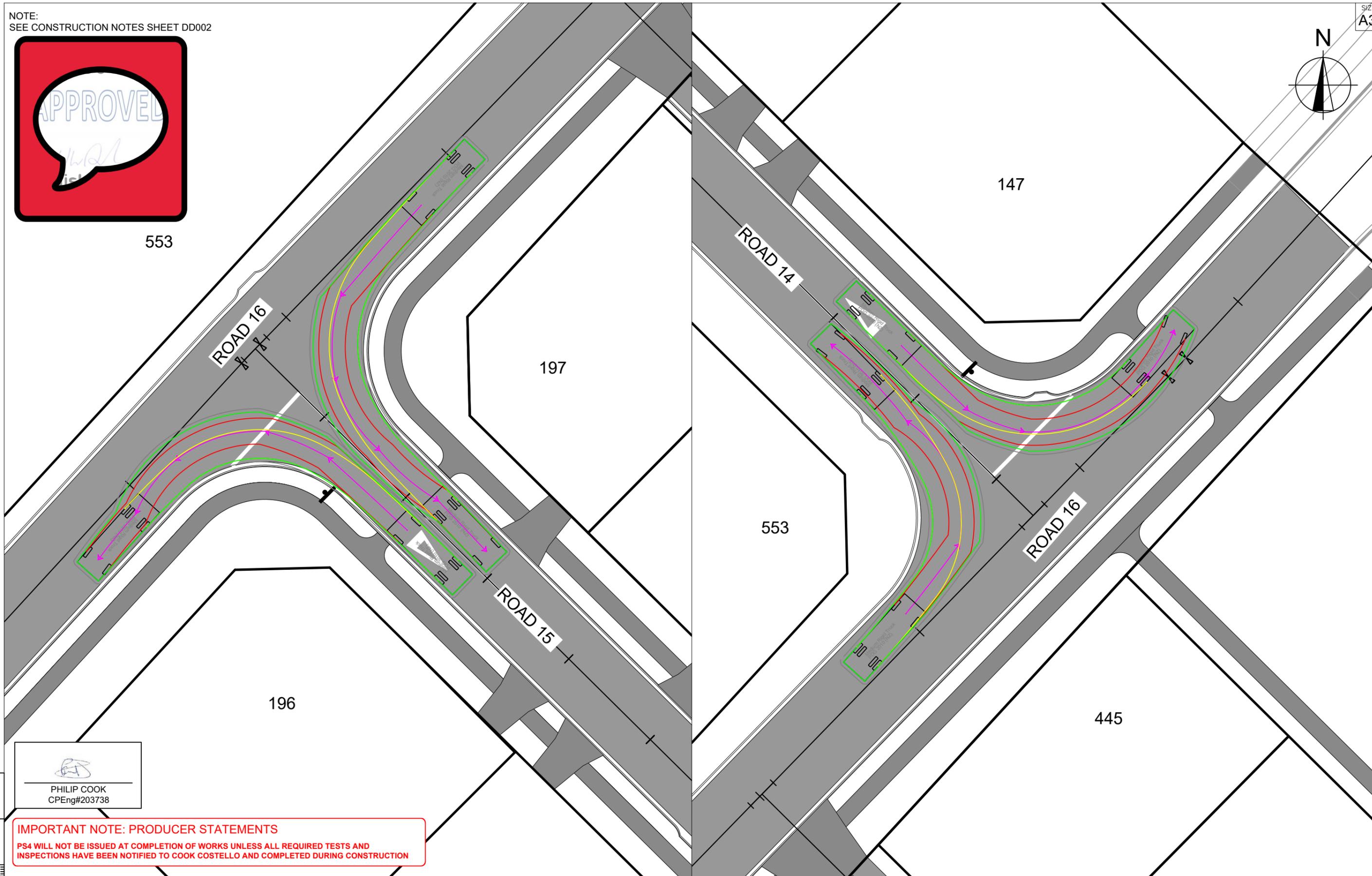
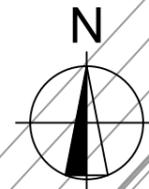
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NOTE:
SEE CONSTRUCTION NOTES SHEET DD002



SIZE
A3



SCALE 1:300
12
8
4
0


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	
		KH	PC
A	1st ISSUE	07-12-22	
		KH	PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE TRACKING CURVES
INTERSECTION OF ROADS 15 AND 16
& ROADS 14 AND 16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:300 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD588	REVISION	B				

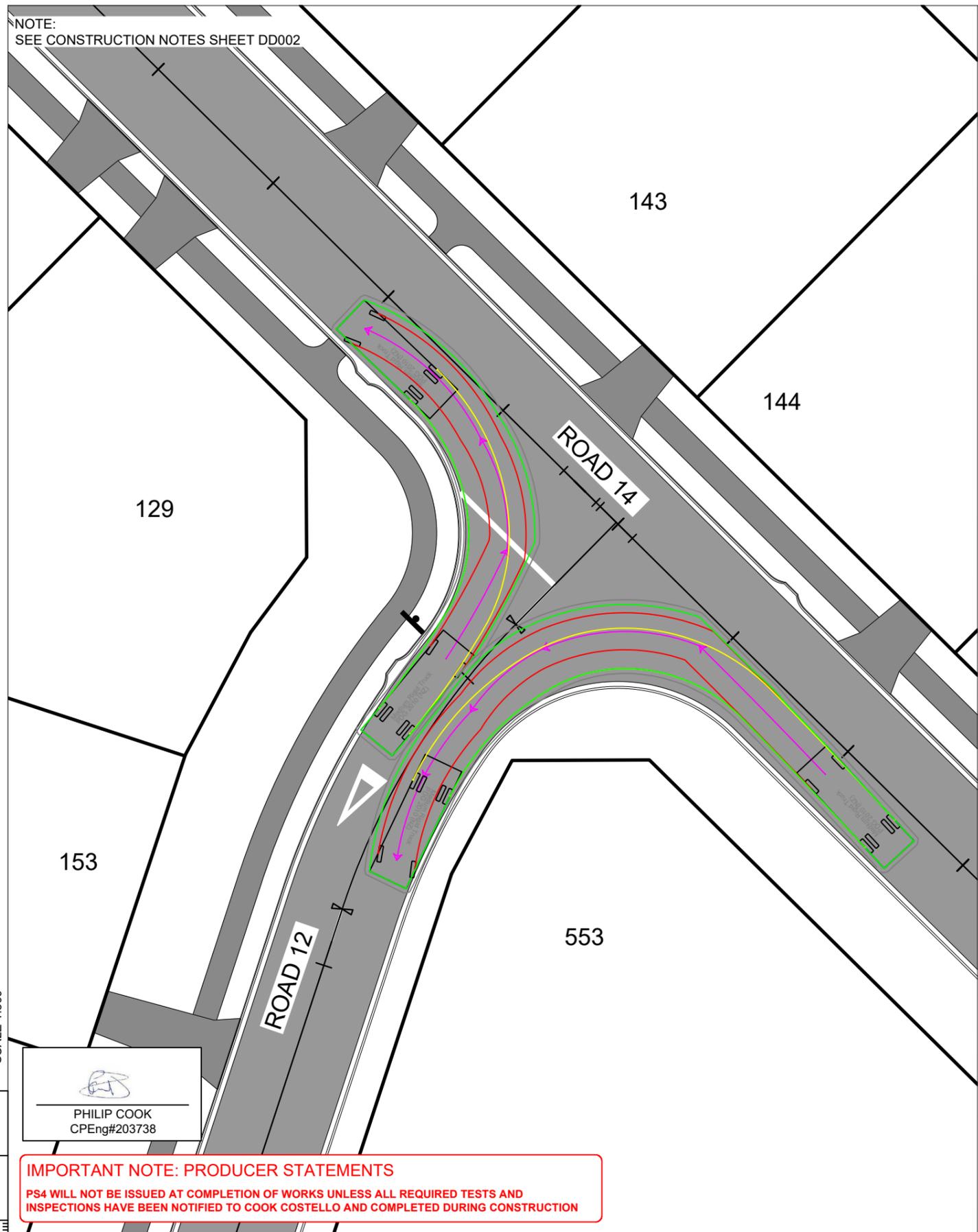
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NOTE:
SEE CONSTRUCTION NOTES SHEET DD002

SIZE
A3



SCALE 1:300
12
8
4
0


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



REV.	REVISION DETAILS	DATE	DRAWN	APP.
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A	1st ISSUE	07-12-22	KH	PC

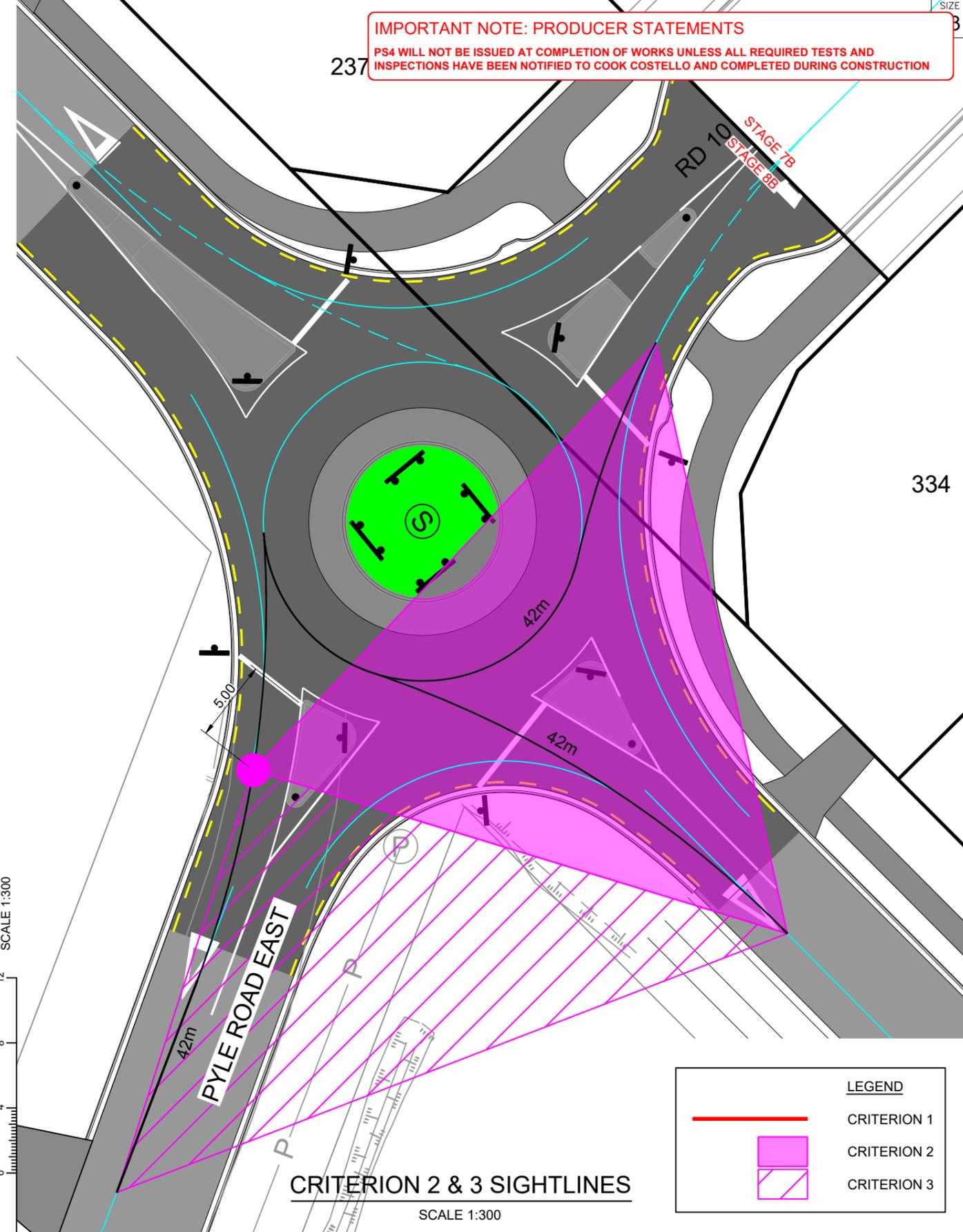
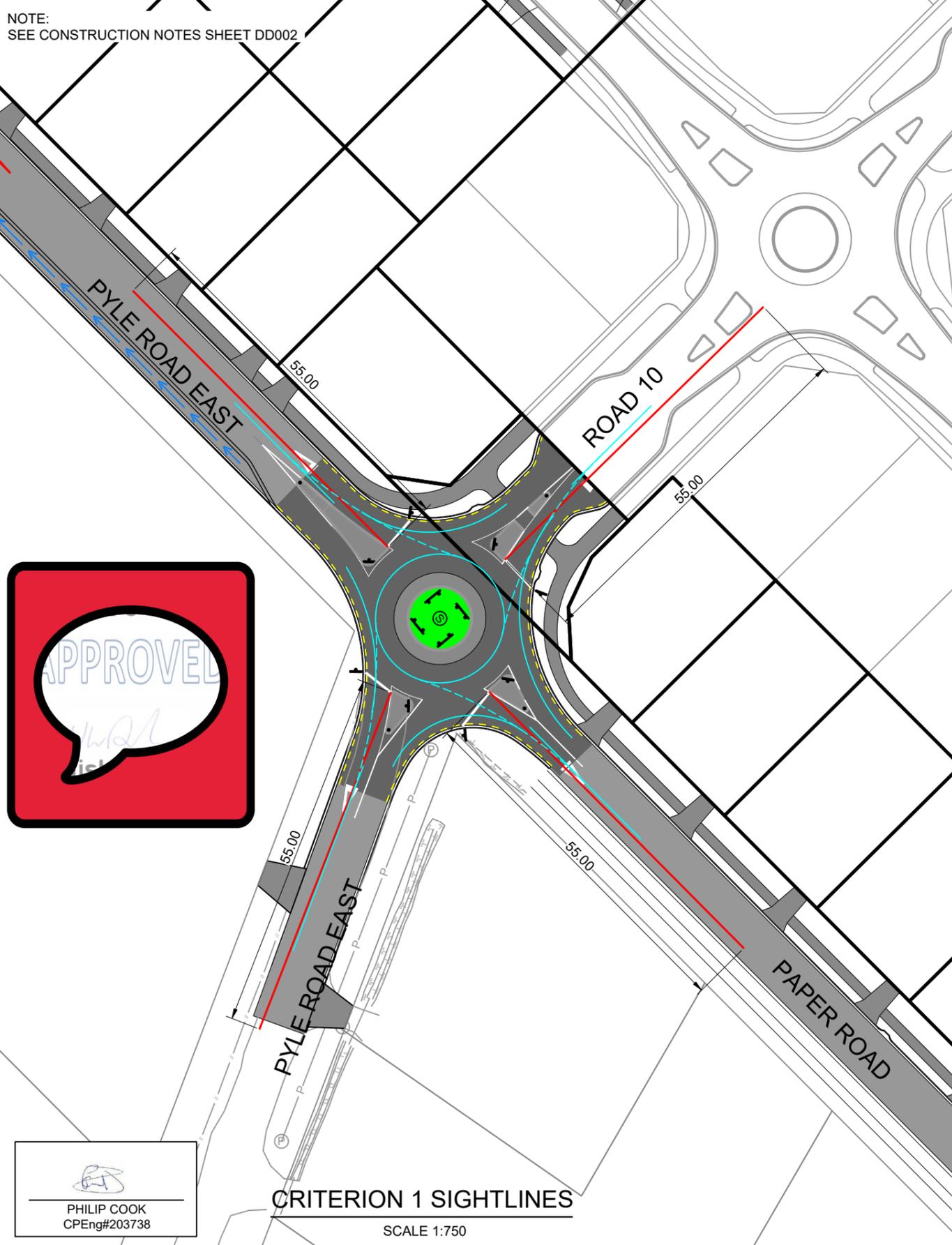
PROJECT DETAILS	
CLIENT	WFH PROPERTIES LIMITED
PROJECT	THE LANDING - STAGES 8A, 8B & 9
LOCATION	ONE TREE POINT RUAKAKA

TITLE	
VEHICLE TRACKING CURVES INTERSECTION OF ROADS 12 AND 14	

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:300 @ A3		STATUS	FOR APPROVAL	
DWG NUMBER	DD589		REVISION	B			

NOTE:
SEE CONSTRUCTION NOTES SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



PHILIP COOK
CPEng#203738

CRITERION 1 SIGHTLINES
SCALE 1:750

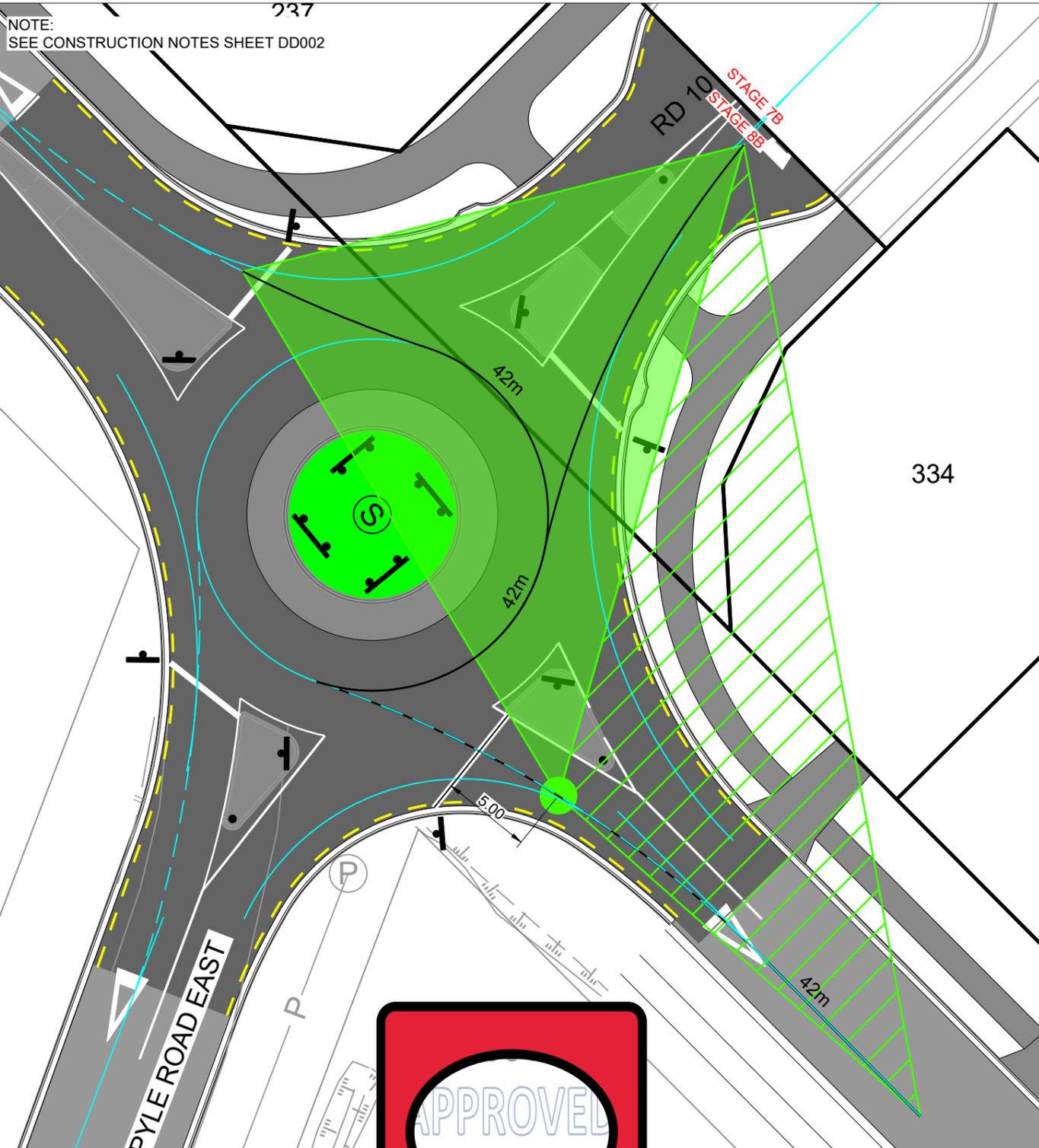
CRITERION 2 & 3 SIGHTLINES
SCALE 1:300

LEGEND	
	CRITERION 1
	CRITERION 2
	CRITERION 3

<p>cook costello www.coco.co.nz Whangarei Auckland Wellington Christchurch</p>	C			PROJECT DETAILS	TITLE	SCALE 1:300	DATE CREATED	DRAWN	DESIGNED	APPROVED
	B	PLAN SET UPDATED	17-03-23	WHF PROPERTIES LIMITED	8	12	07/12/2022	K HANSARD	R BROOKES	P COOK
	A	1st ISSUE	07-12-22	THE LANDING - STAGES 8A, 8B & 9			CCL REF NO	SCALE		STATUS
	REV.	REVISION DETAILS	DRAWN APP.	ONE TREE POINT RUAKAKA			14333-009	AS SHOWN @ A3		FOR APPROVAL
							DWG NUMBER		REVISION	
							DD590		B	

NOTE:
SEE CONSTRUCTION NOTES SHEET DD002

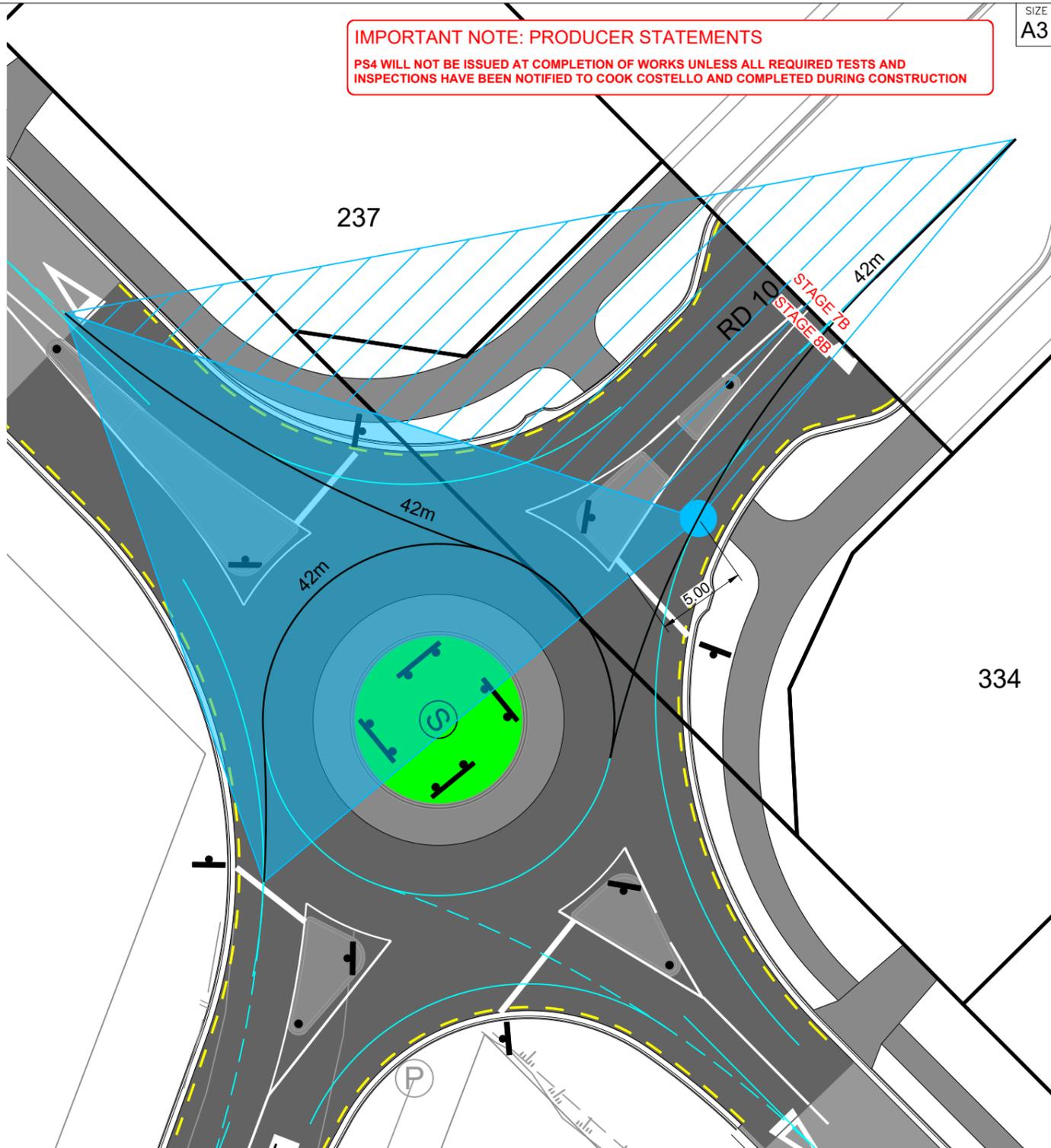
SIZE
A3



LEGEND

- CRITERION 1
- CRITERION 2
- CRITERION 3

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



LEGEND

- CRITERION 1
- CRITERION 2
- CRITERION 3

PHILIP COOK
CPEng#203738

CRITERION 2 & 3 SIGHTLINES
SCALE 1:300

CRITERION 2 & 3 SIGHTLINES
SCALE 1:300



C			
B	PLAN SET UPDATED	17-03-23	
		KH PC	
A	1st ISSUE	07-12-22	
		KH PC	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WHF PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE SIGHT LINES
ROUNDBOUT 16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:300 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD591	REVISION	B				

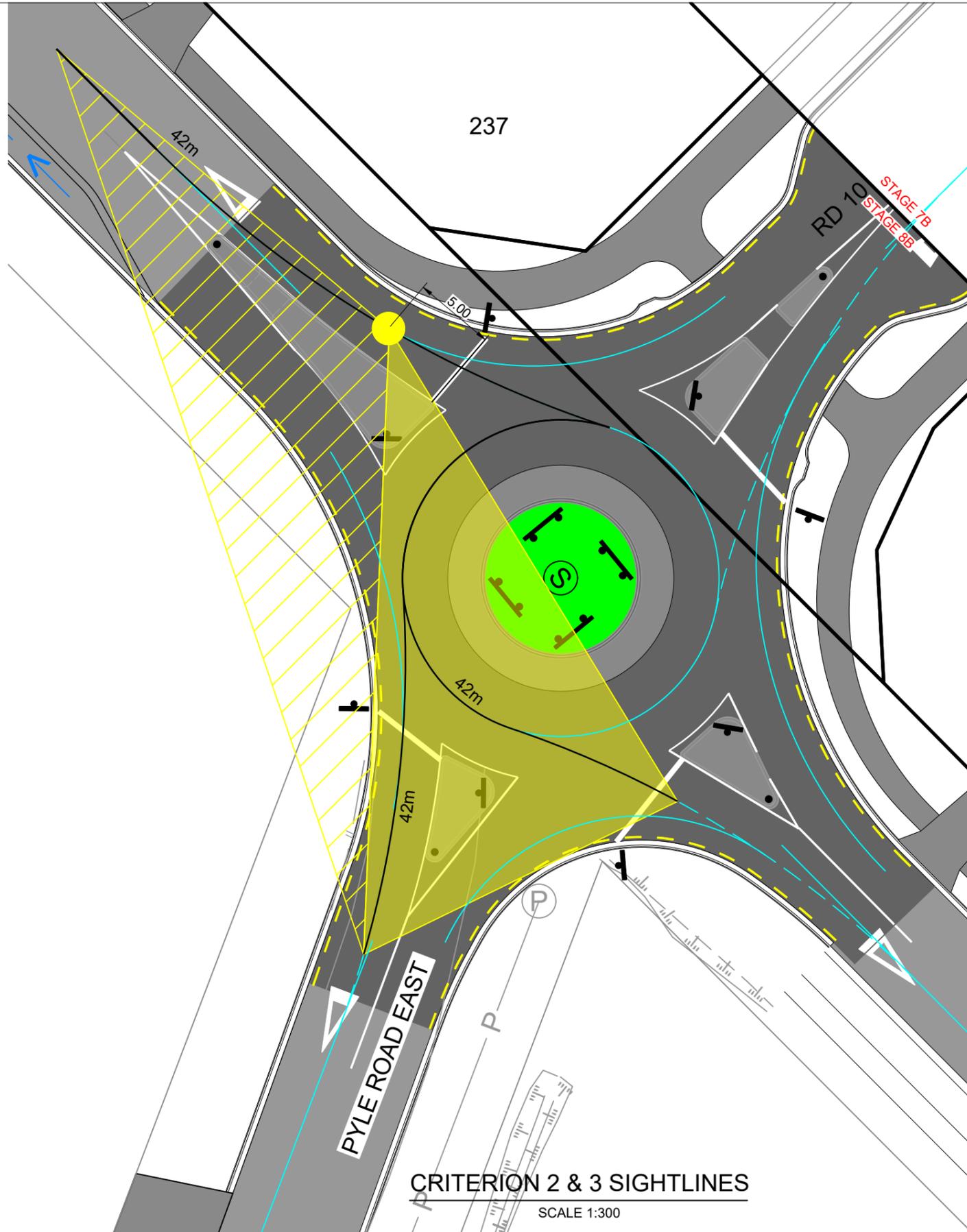
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NOTE:
SEE CONSTRUCTION NOTES SHEET DD002

SIZE
A3



SCALE 1:300
12
8
4
0

LEGEND	
	CRITERION 1
	CRITERION 2
	CRITERION 3

CRITERION 2 & 3 SIGHTLINES
SCALE 1:300

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738



REV.	REVISION DETAILS	DATE	DRAWN	APP.
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B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC

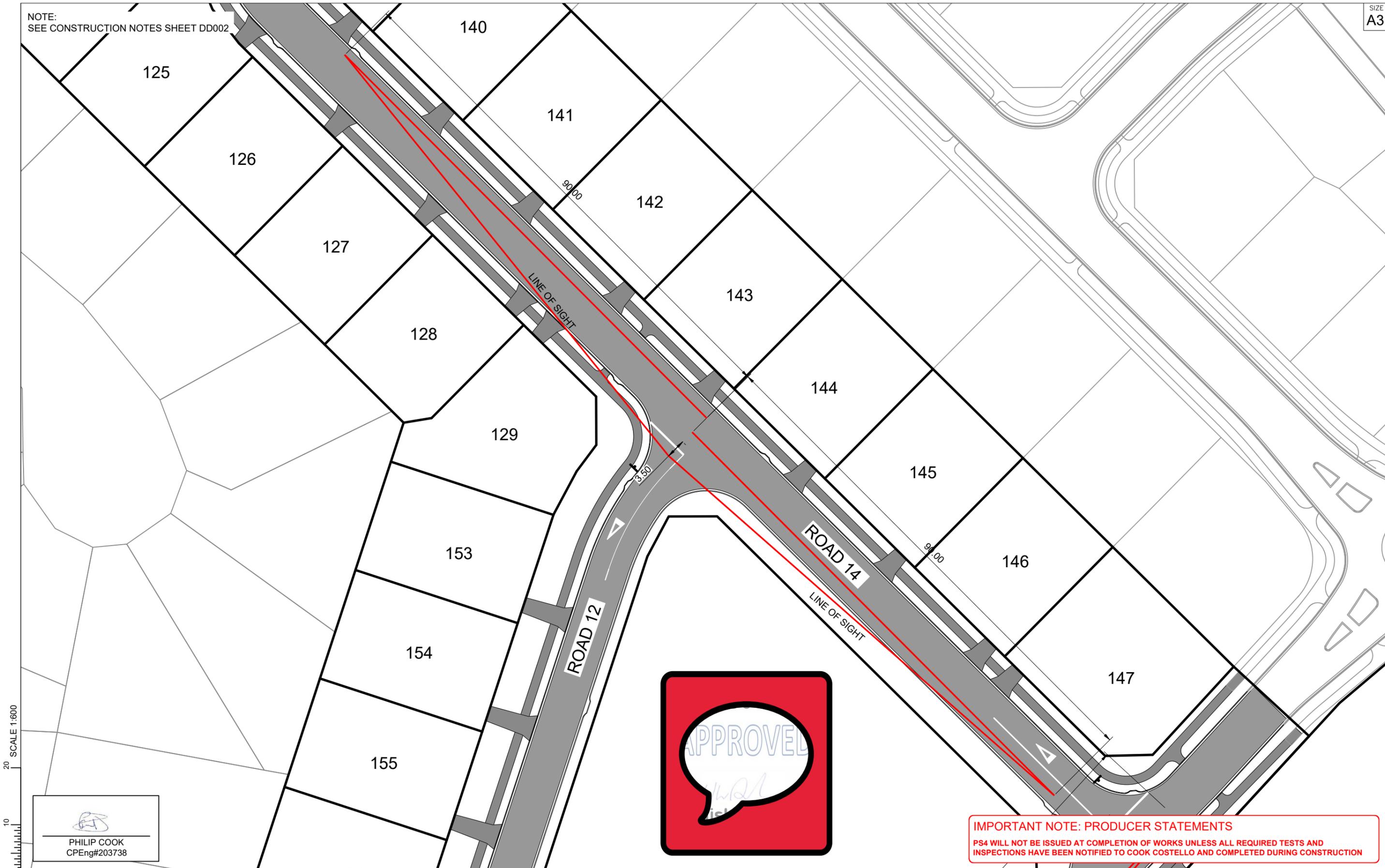
PROJECT DETAILS	TITLE
WHF PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	VEHICLE SIGHT LINES ROUNDABOUT 16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:300 @ A3	STATUS		FOR APPROVAL	
DWG NUMBER	DD592	REVISION		B			

SCALE 1:300
0 4 8 12

NOTE:
SEE CONSTRUCTION NOTES SHEET DD002

SIZE
A3



SCALE 1:600
0 10 20


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



REV.	REVISION DETAILS	DRAWN	APP.
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B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

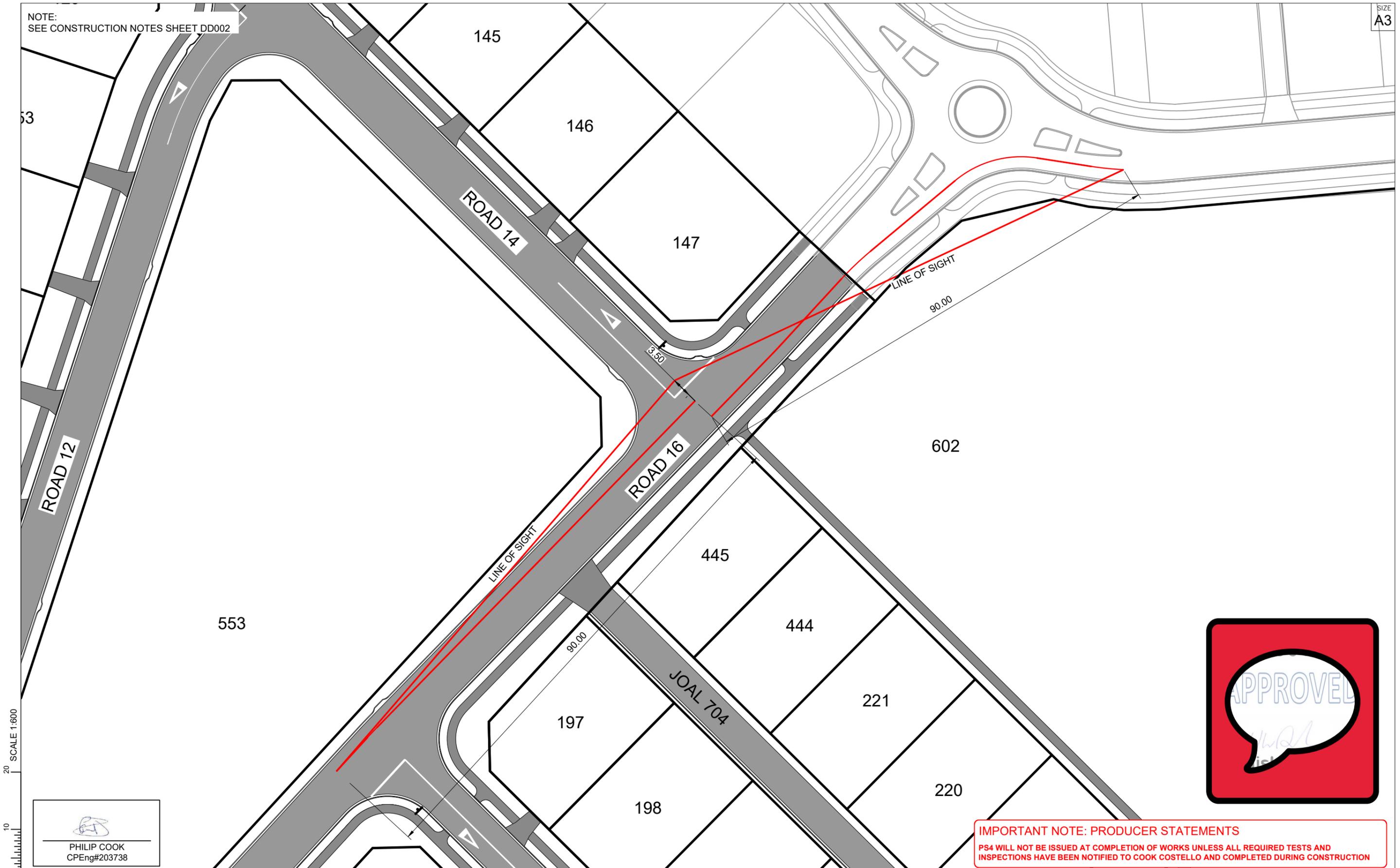
PROJECT DETAILS
WHF PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE SIGHT LINES
INTERSECTION OF ROADS 12 AND 14

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:600 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD593		REVISION B	

NOTE:
SEE CONSTRUCTION NOTES SHEET_DD002

SIZE
A3



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738



REV.	REVISION DETAILS	DATE	DRAWN	APP.
C				
B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC

PROJECT DETAILS
WHF PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE SIGHT LINES
INTERSECTION OF ROADS 14 AND 16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:600 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD594		REVISION	B			

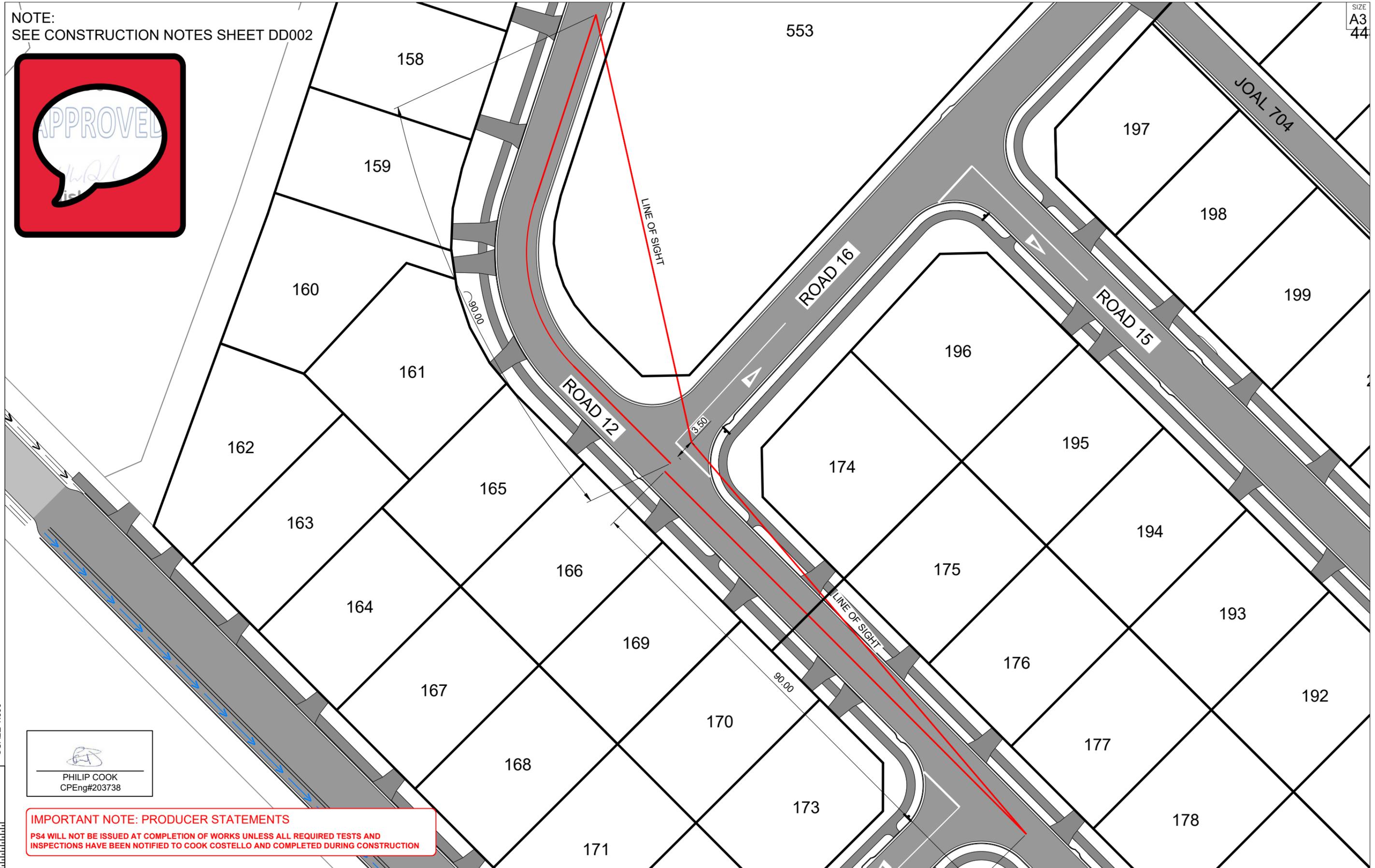
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NOTE:
SEE CONSTRUCTION NOTES SHEET DD002

SIZE
A3
44




PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



REV.	REVISION DETAILS	DRAWN	APP.
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A	1st ISSUE	07-12-22	
		KH	PC

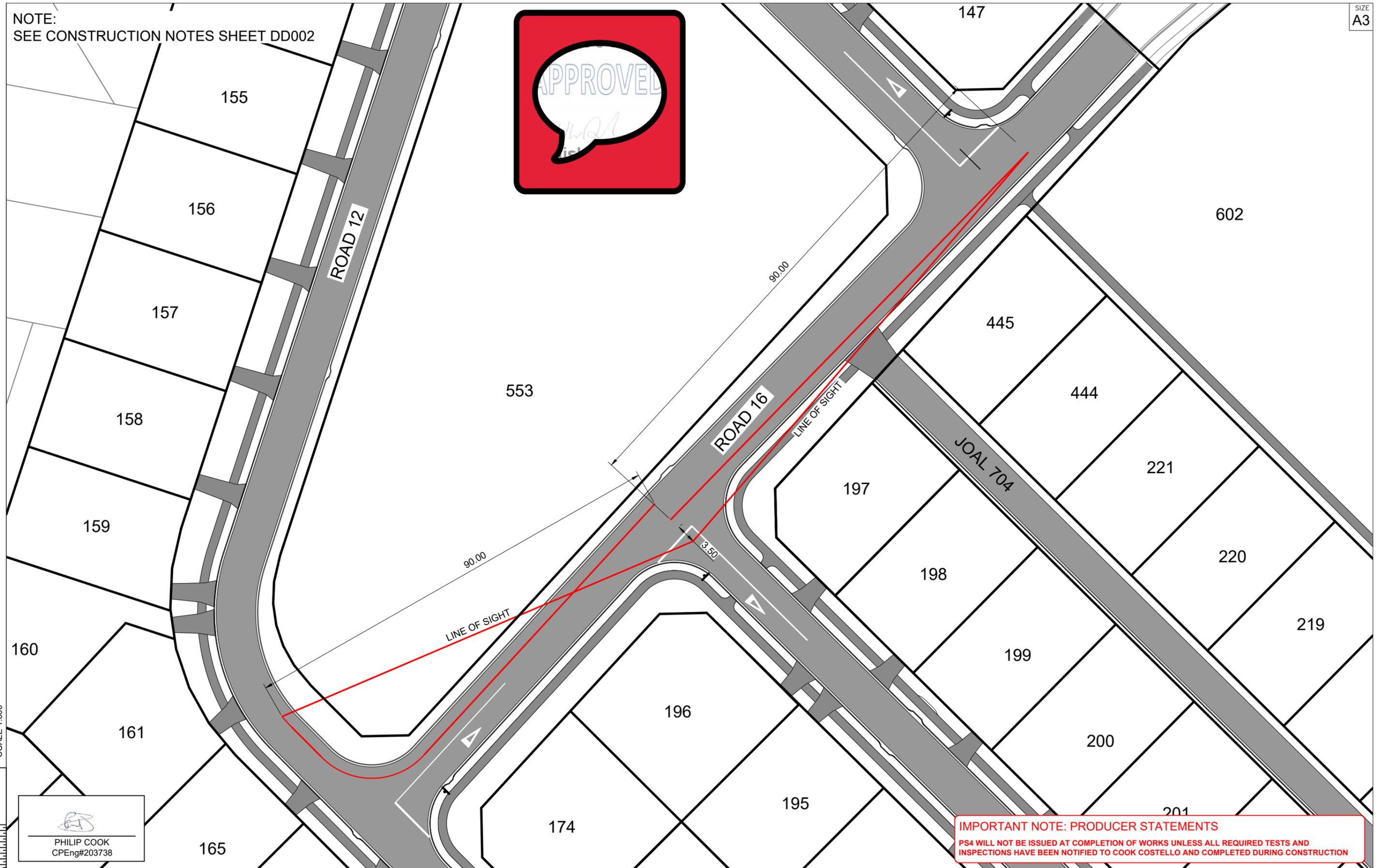
PROJECT DETAILS	
WHF PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	

TITLE
VEHICLE SIGHT LINES INTERSECTION OF ROADS 12 AND 16

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:600 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD595	REVISION B		

NOTE:
SEE CONSTRUCTION NOTES SHEET DD002

SIZE
A3



SCALE 1:600
0 10 20

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



REV.	REVISION DETAILS	DRAWN	APP.
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B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

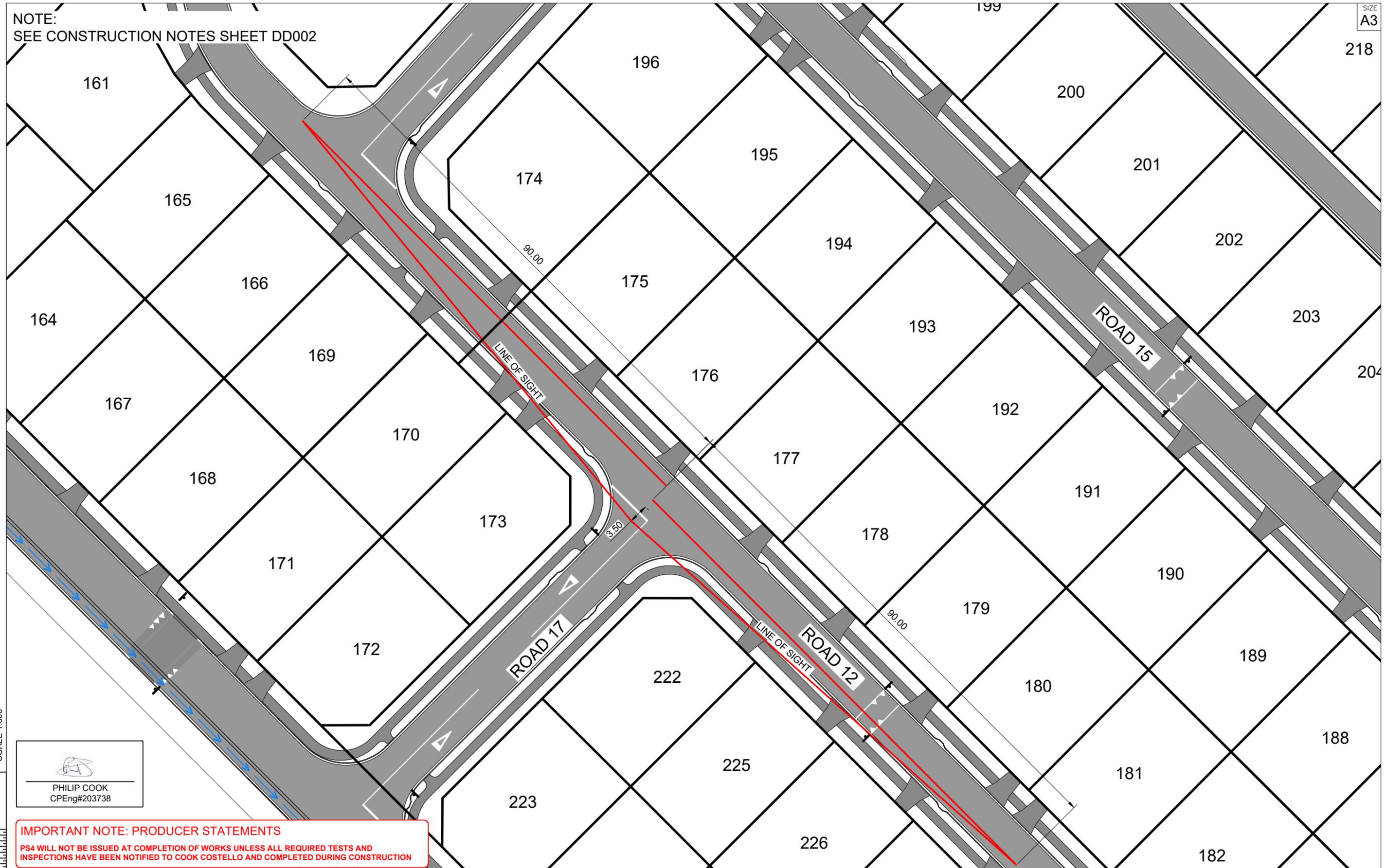
PROJECT DETAILS
WHF PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
VEHICLE SIGHT LINES
 INTERSECTION OF ROADS 15 AND 16

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:600 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD596		REVISION B	

NOTE:
SEE CONSTRUCTION NOTES SHEET DD002

SIZE
A3



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	
		KH	PC
A	1st ISSUE	07-12-22	
		KH	PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WHF PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE SIGHT LINES
INTERSECTION OF ROADS 12 AND 17

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:600 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD597	REVISION B		

NOTE:
SEE CONSTRUCTION NOTES SHEET DD002 17

SIZE
A3



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:600
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PHILIP COOK
CPEng#203738

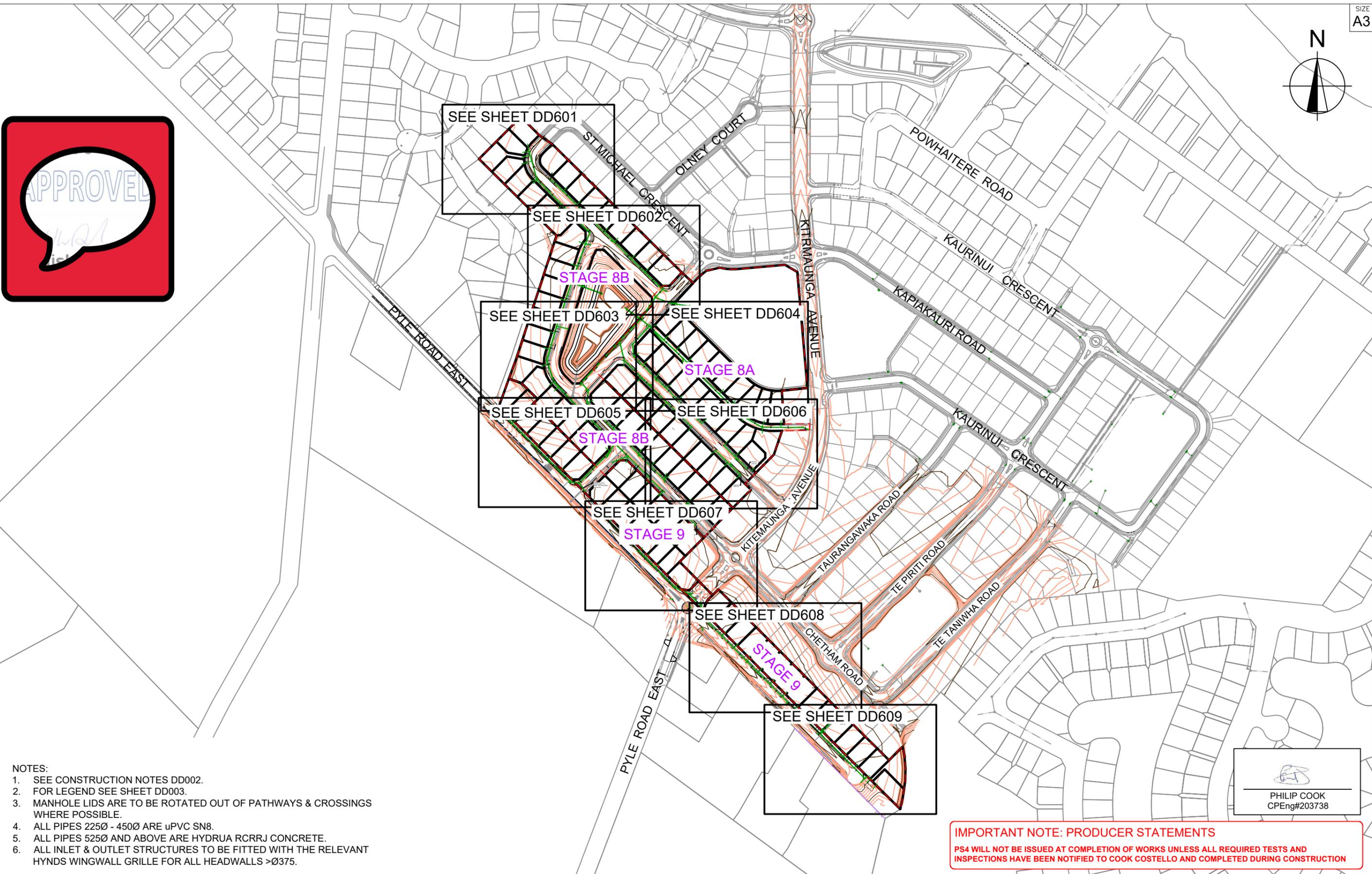


REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS
WHF PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
VEHICLE SIGHT LINES
INTERSECTION OF ROAD 17 AND PYLE ROAD EAST

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:600 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD598	REVISION B		



SCALE 1:4000
150
100
50
0

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
 4. ALL PIPES 225Ø - 450Ø ARE uPVC SN8.
 5. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE.
 6. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	
		KH	PC
A	1st ISSUE	07-12-22	
		KH	PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER PLAN
OVERVIEW

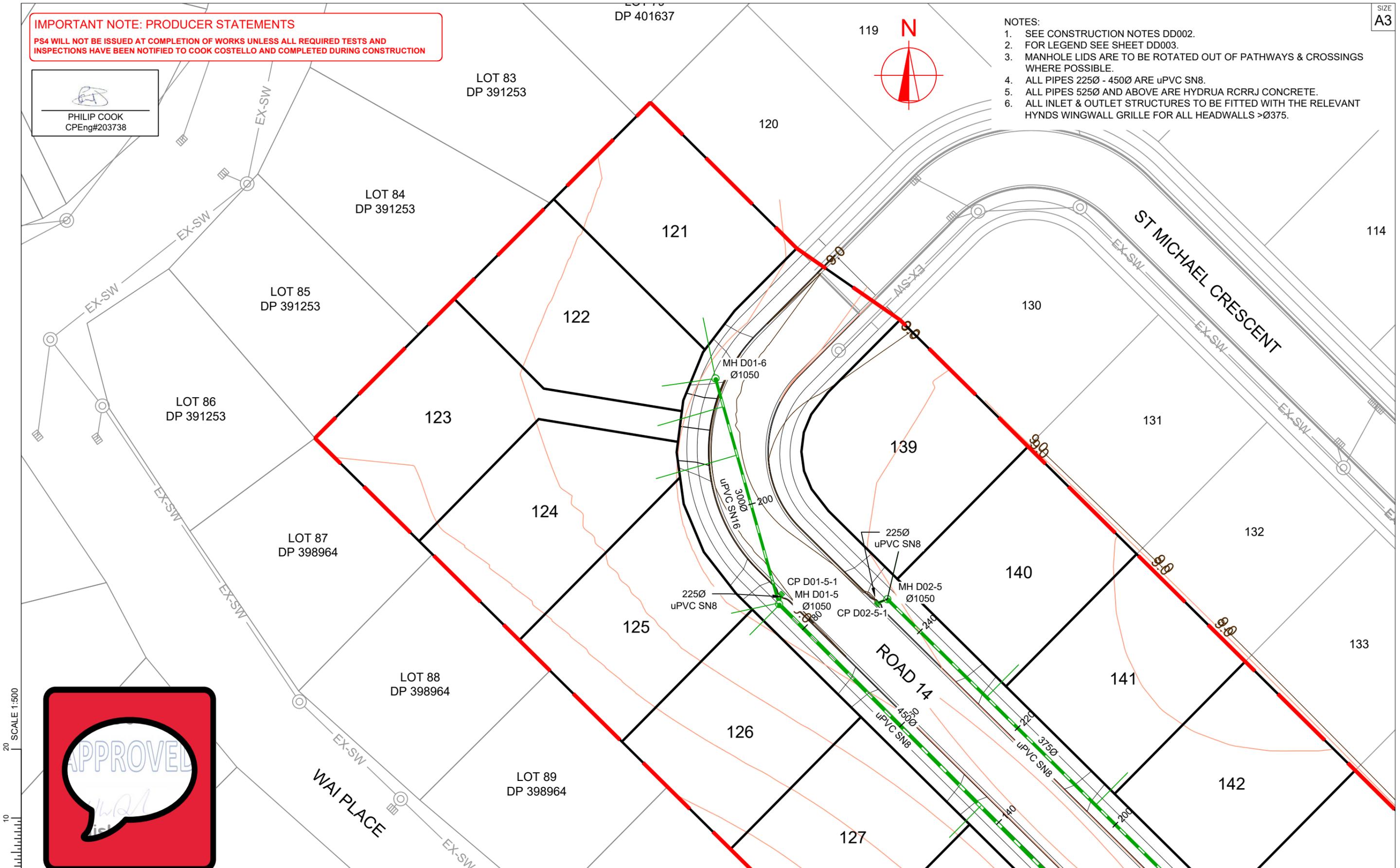
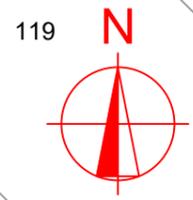
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CCL REF NO	14333-009	SCALE	1:4000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD600	REVISION	B				

SCALE 1:4000
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IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
 4. ALL PIPES 225Ø - 450Ø ARE uPVC SN8.
 5. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE.
 6. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.



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Whangarei | Auckland | Wellington | Christchurch

C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
STORMWATER PLAN
 SHEET 1

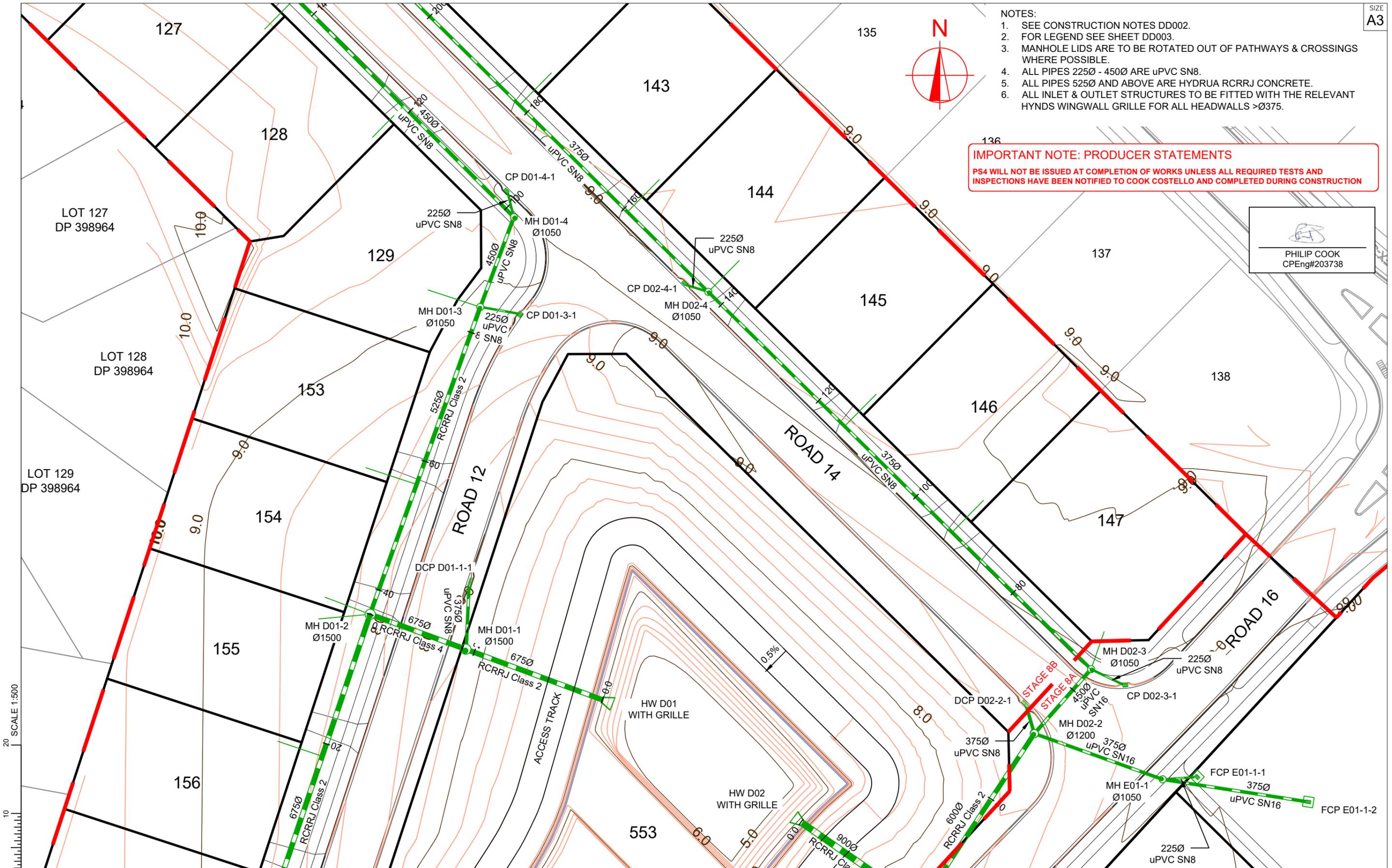
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CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD601	REVISION	B				

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
 4. ALL PIPES 225Ø - 450Ø ARE uPVC SN8.
 5. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE.
 6. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.



IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


 PHILIP COOK
 CPEng#203738



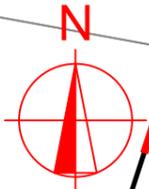
REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED		
A	1st ISSUE		

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER PLAN
SHEET 2

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD602	REVISION B		

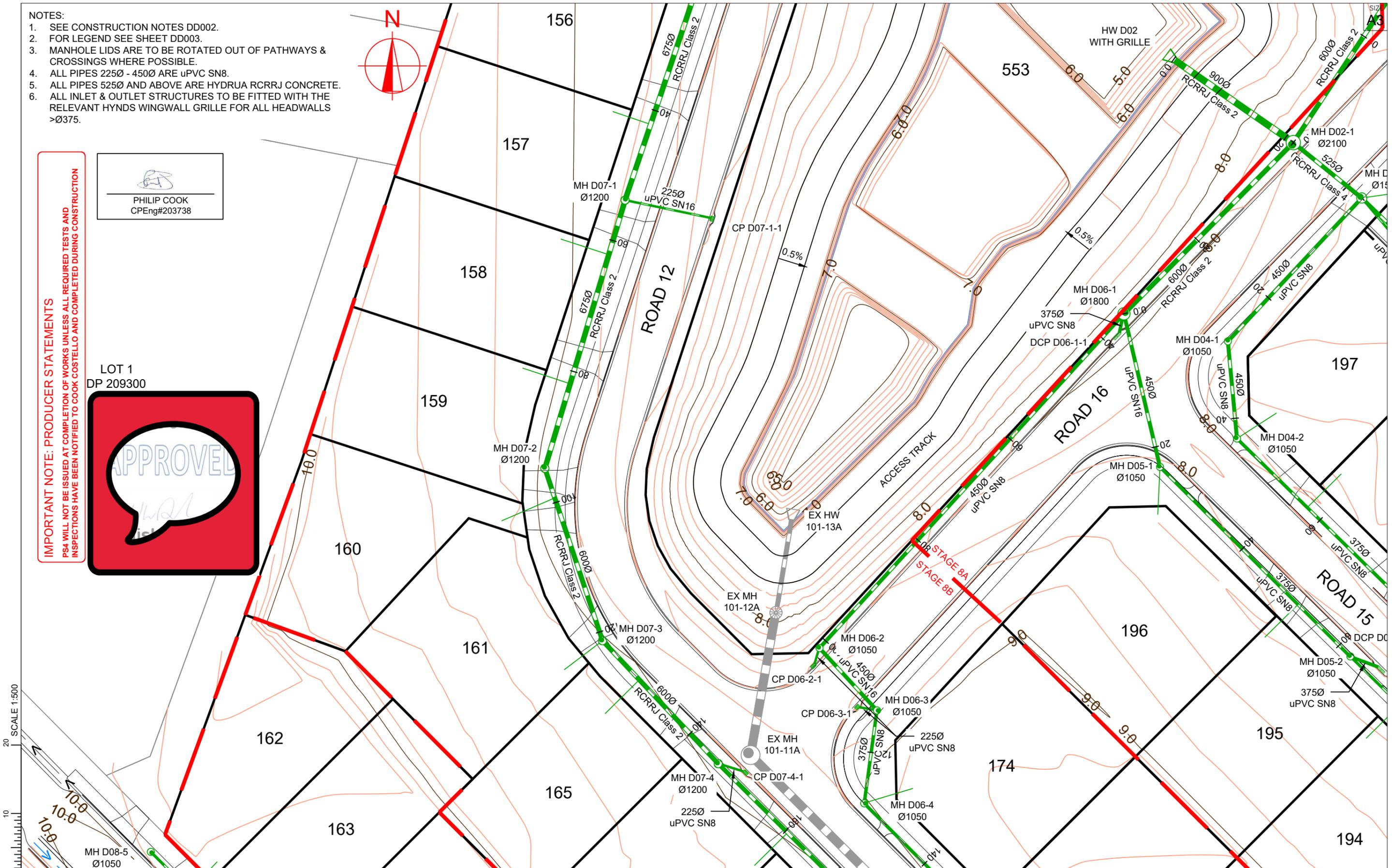
- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
 4. ALL PIPES 225Ø - 450Ø ARE uPVC SN8.
 5. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE.
 6. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.



IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


 PHILIP COOK
 CPEng#203738

LOT 1
 DP 209300



SCALE 1:500



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

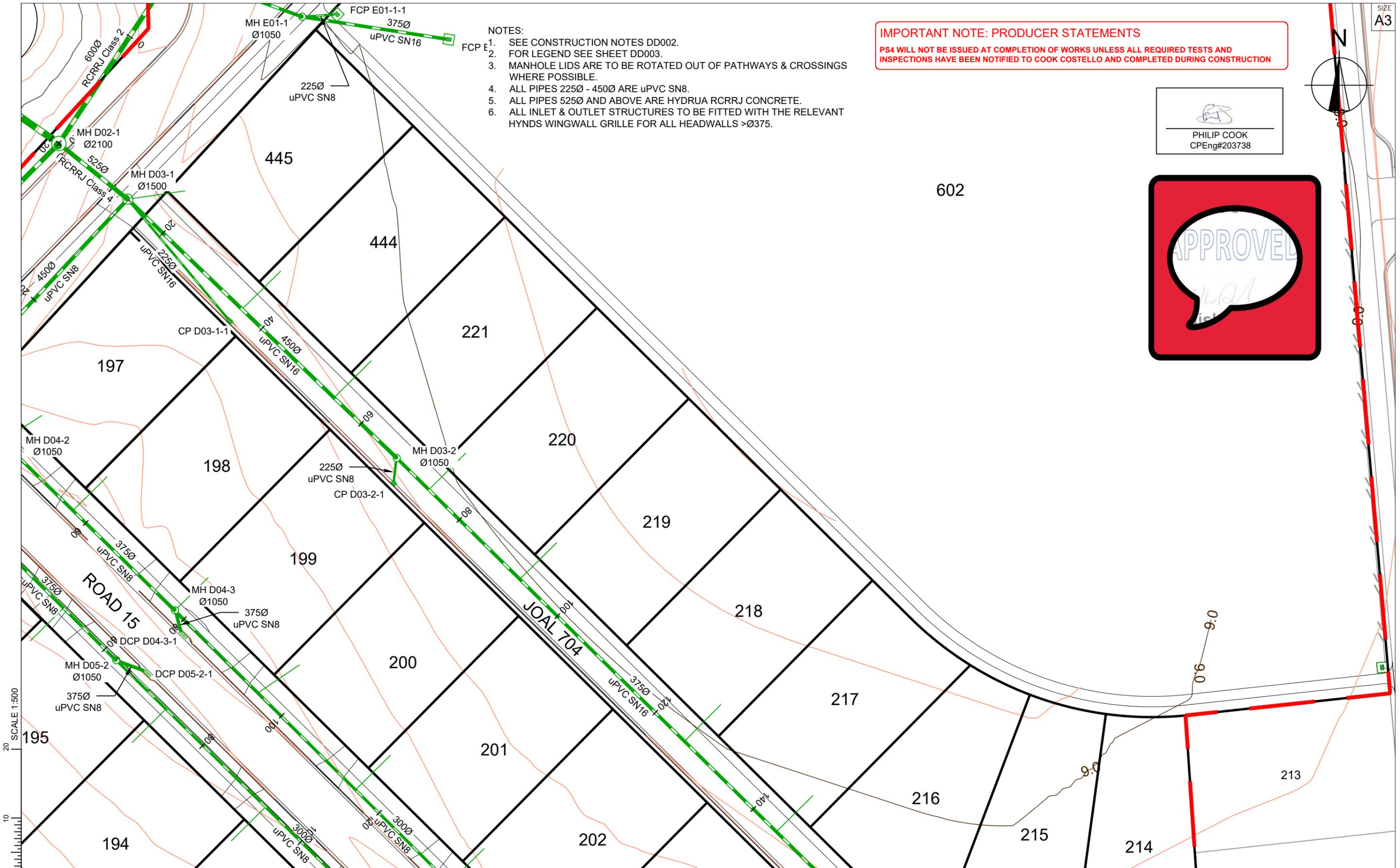
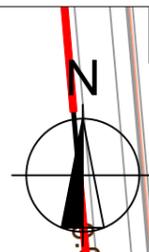
TITLE
STORMWATER PLAN
SHEET 3

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD603	REVISION	B				

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
 4. ALL PIPES 225Ø - 450Ø ARE uPVC SN8.
 5. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE.
 6. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.


PHILIP COOK
CPEng#203738



SCALE 1:500
0 10 20

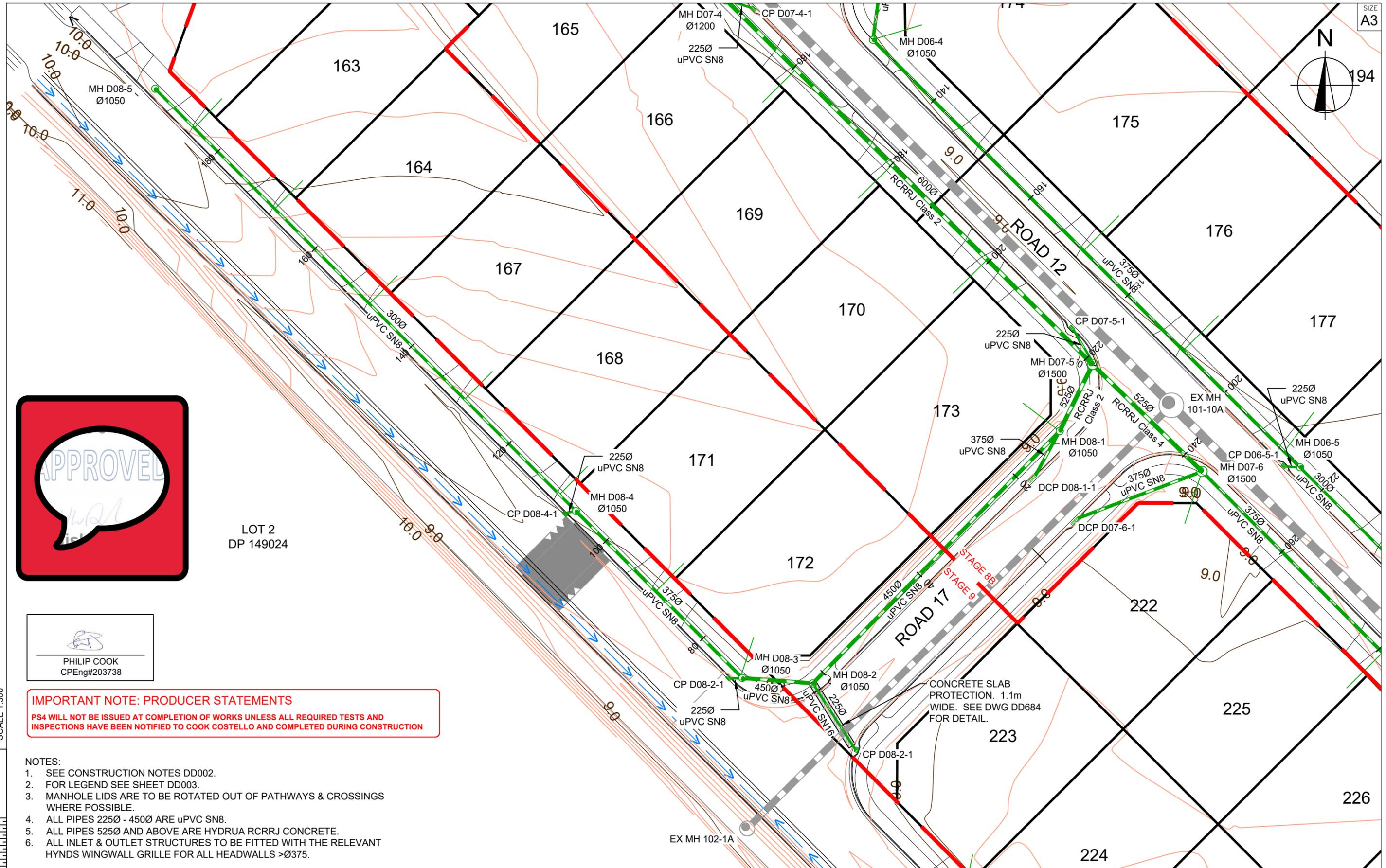
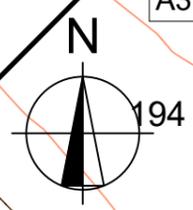


C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER PLAN
SHEET 4

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD604	REVISION	B				



LOT 2
DP 149024

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
 4. ALL PIPES 225Ø - 450Ø ARE uPVC SN8.
 5. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE.
 6. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

CONCRETE SLAB PROTECTION. 1.1m WIDE. SEE DWG DD684 FOR DETAIL.



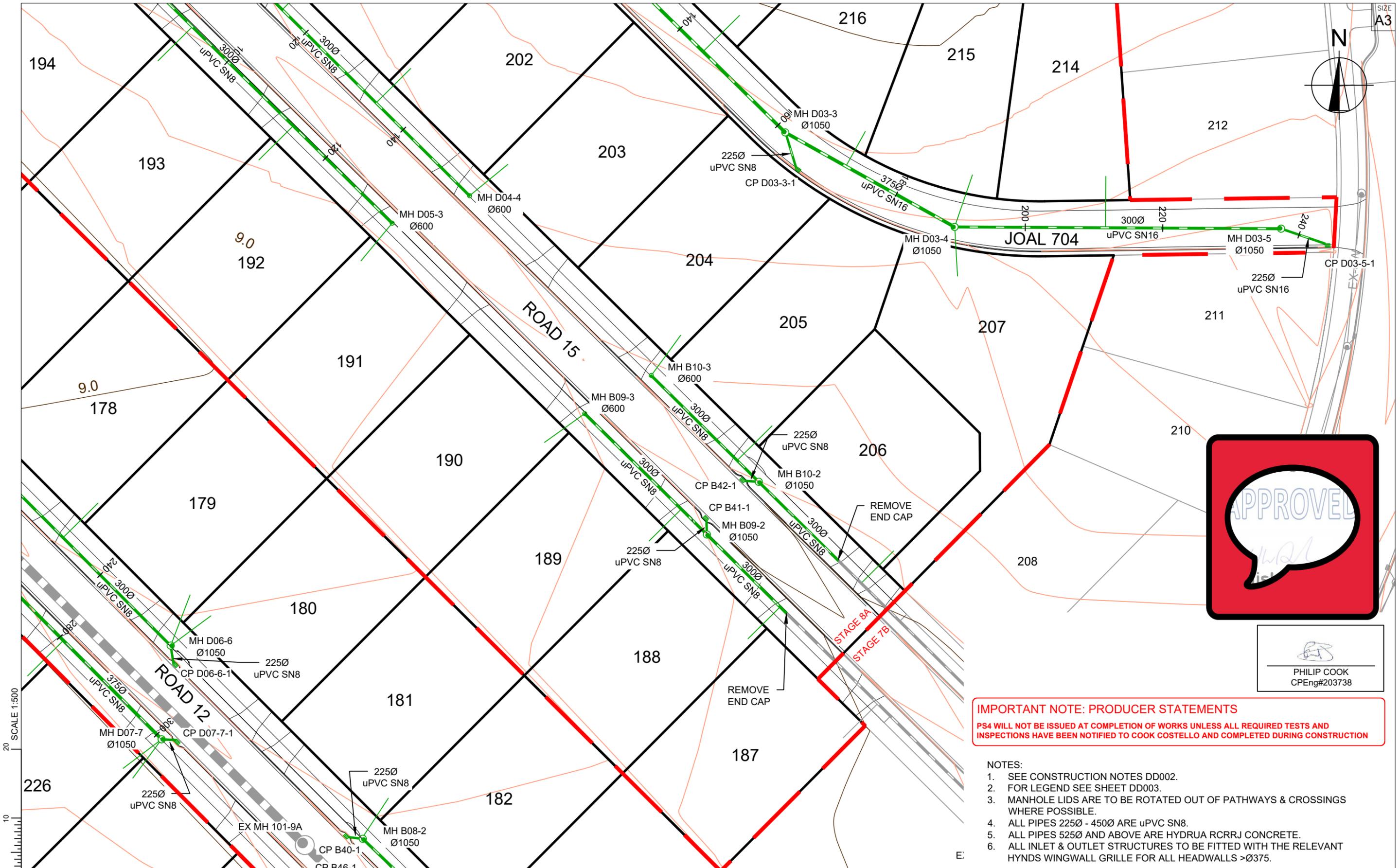
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B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS	TITLE
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	STORMWATER PLAN SHEET 5

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:500 @ A3	FOR APPROVAL	
DWG NUMBER		REVISION	
DD605		B	

SCALE 1:500

SCALE 1:500



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
 4. ALL PIPES 225Ø - 450Ø ARE uPVC SN8.
 5. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE.
 6. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

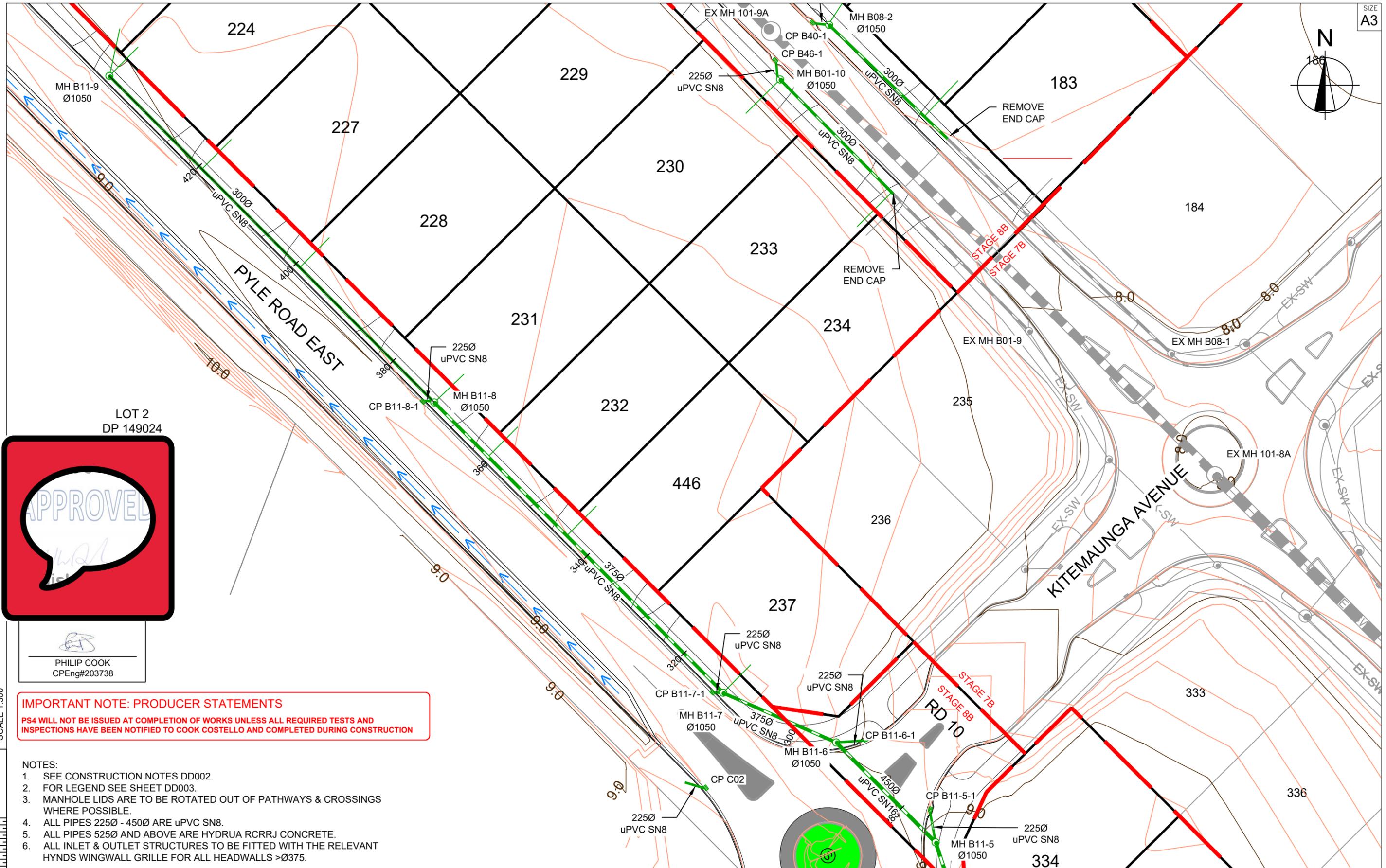
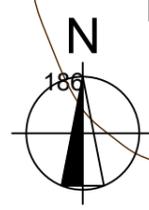


REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER PLAN
SHEET 6

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:500 @ A3	FOR APPROVAL	
DWG NUMBER	REVISION		
DD606	B		



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
 4. ALL PIPES 225Ø - 450Ø ARE uPVC SN8.
 5. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE.
 6. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

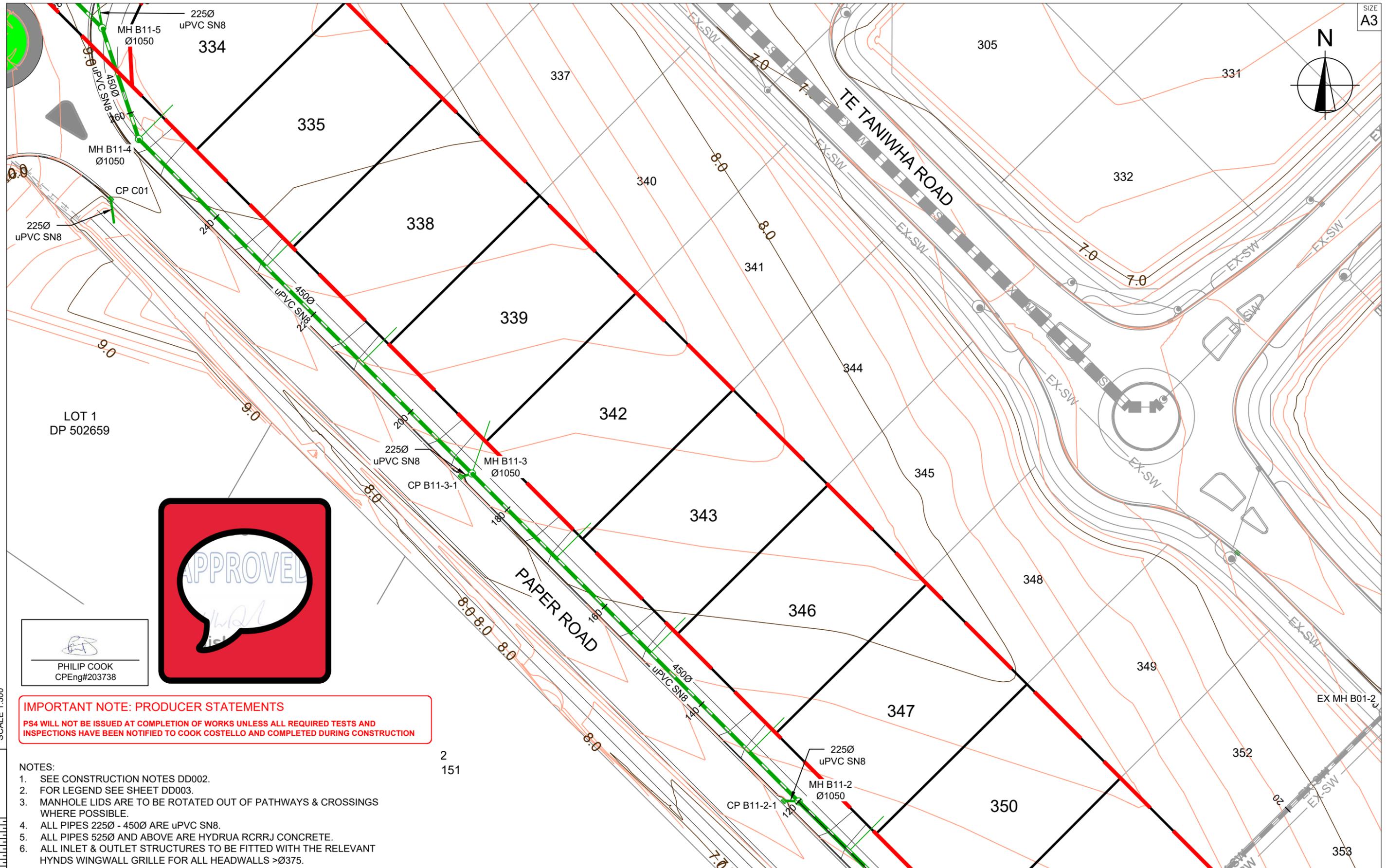
PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

STORMWATER PLAN
SHEET 7

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD607	REVISION	B				



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
 4. ALL PIPES 225Ø - 450Ø ARE uPVC SN8.
 5. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE.
 6. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.

SCALE 1:500



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

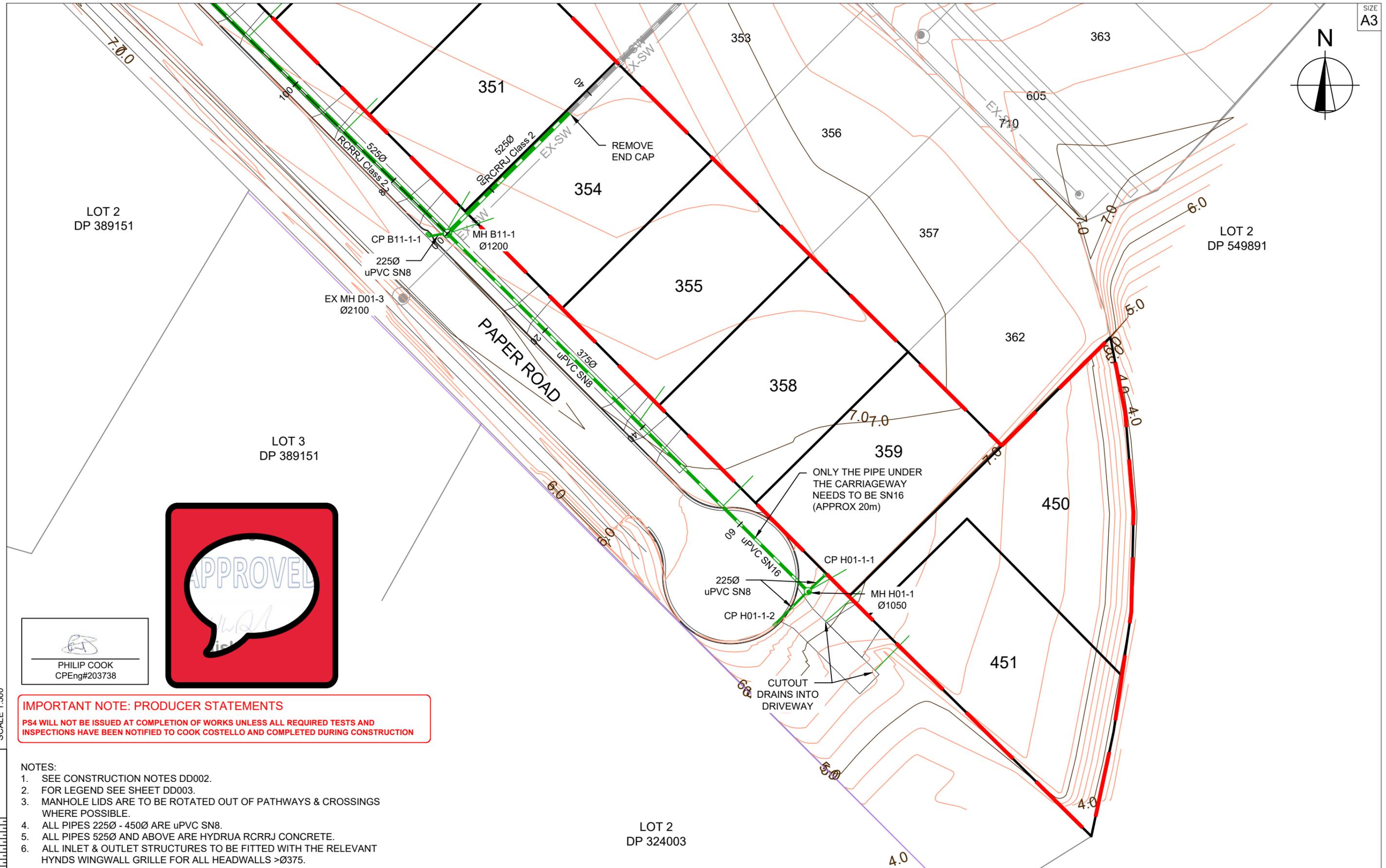
PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

STORMWATER PLAN
SHEET 8

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD608	REVISION	B				



PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
 4. ALL PIPES 225Ø - 450Ø ARE uPVC SN8.
 5. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE.
 6. ALL INLET & OUTLET STRUCTURES TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR ALL HEADWALLS >Ø375.



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

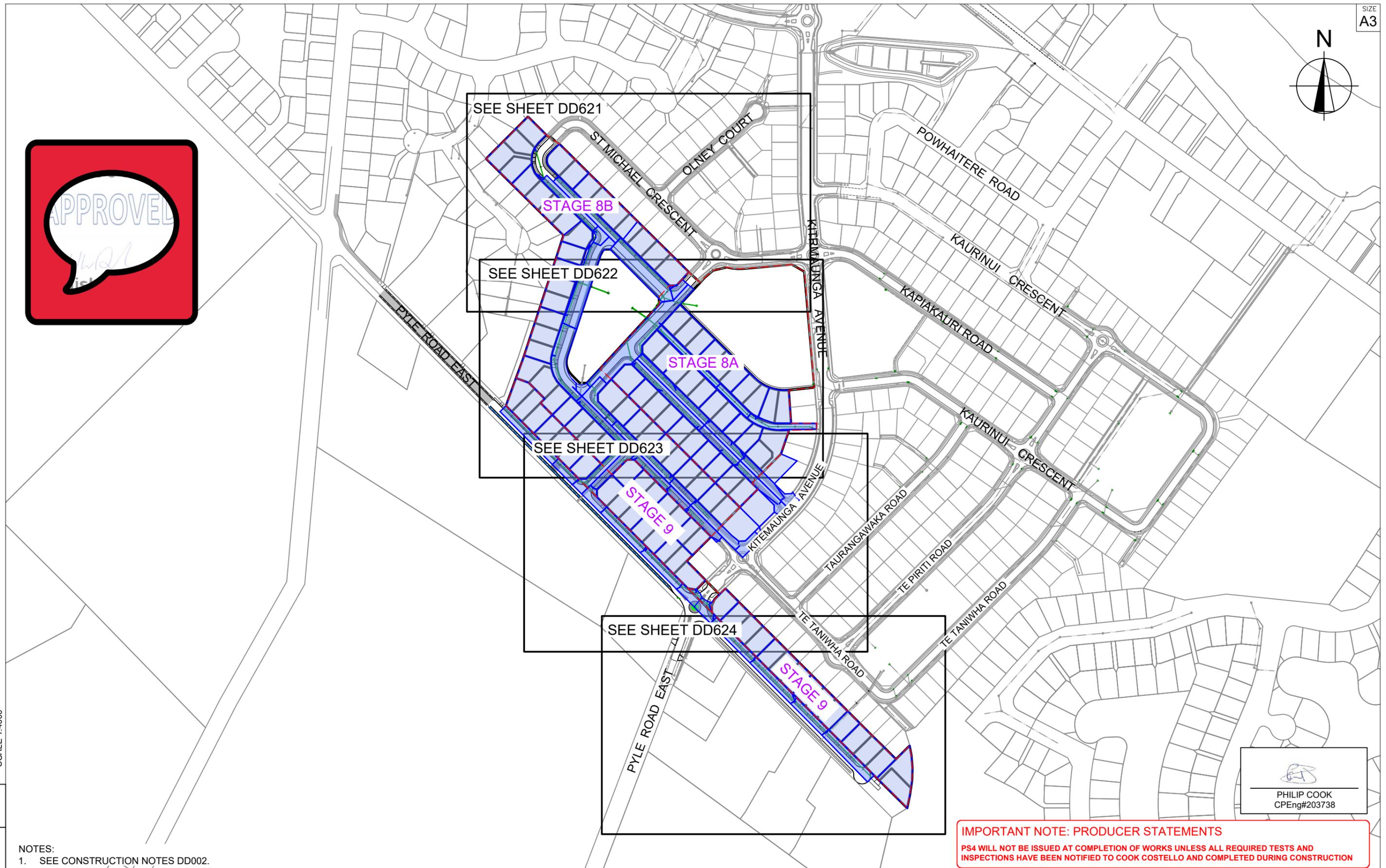
TITLE

STORMWATER PLAN
SHEET 9

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:500 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD609		REVISION B	

SCALE 1:500

SCALE 1:500



SCALE 1:4000
150
100
50
0

NOTES:
1. SEE CONSTRUCTION NOTES DD002.


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B			
A	1st ISSUE	??/??/22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

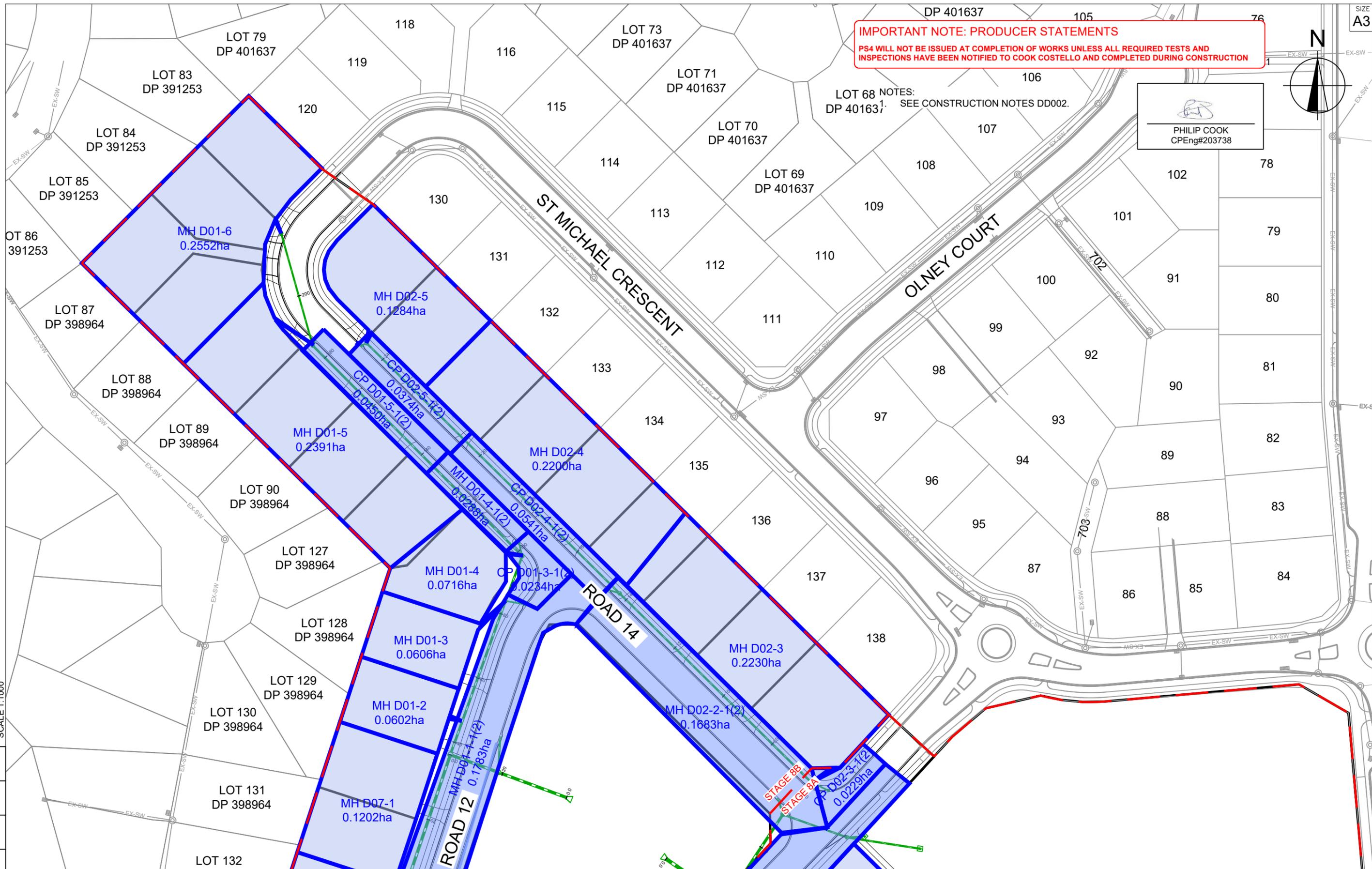
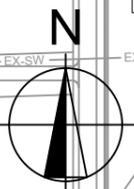
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8 & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER CATCHMENT PLAN
OVERVIEW

DATE CREATED ??/??/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:4000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD620	REVISION A		

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738



SCALE 1:1000
0 10 20 30 40 50



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS		DRAWN APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER CATCHMENT PLAN
SHEET 1

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD621		REVISION	B			

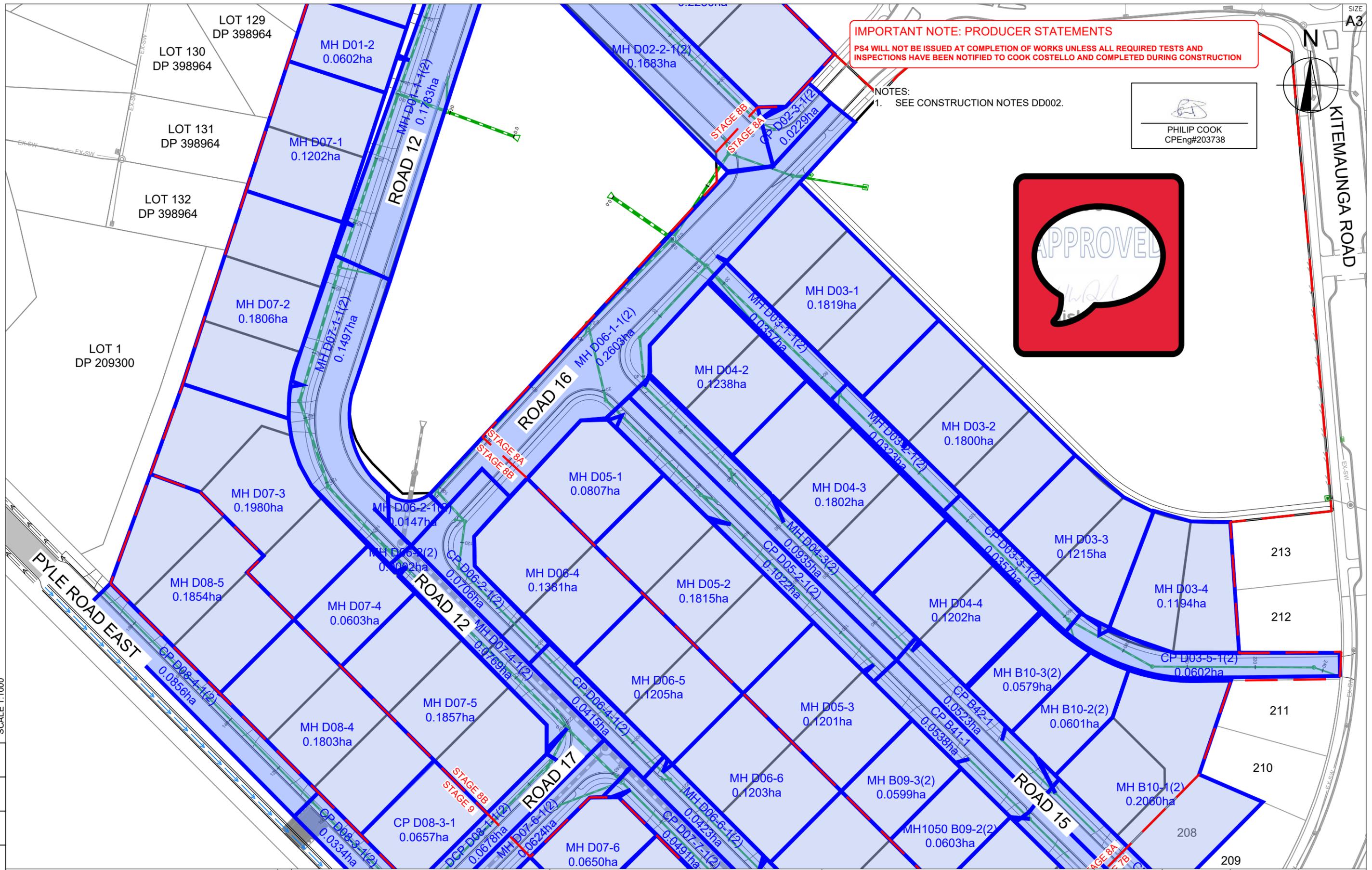
IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES:
1. SEE CONSTRUCTION NOTES DD002.

PHILIP COOK
CPEng#203738



KITEMAUNGA ROAD



50 SCALE 1:1000
40
30
20
10
0

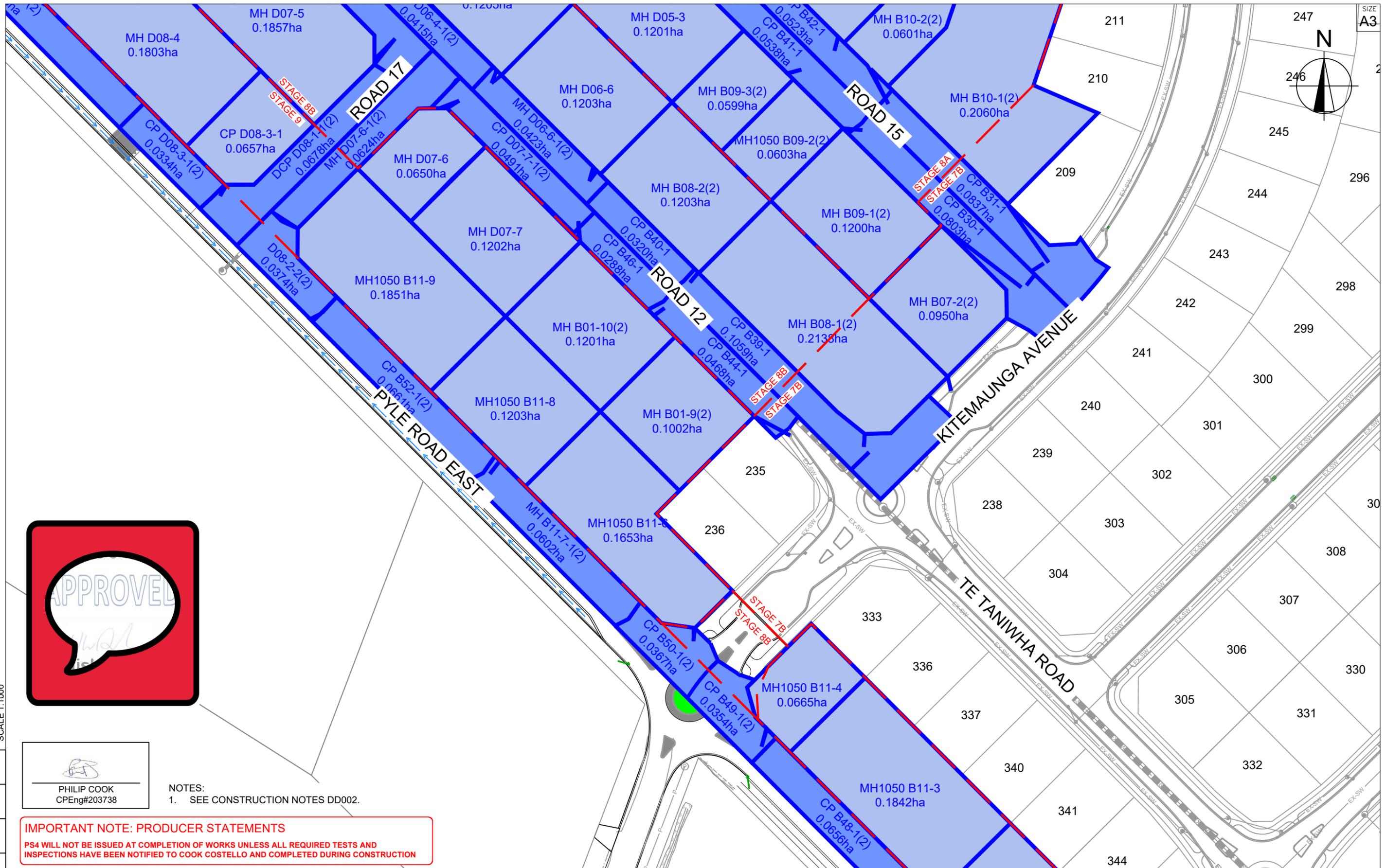


C			
B	PLAN SET UPDATED	17-03-23	
		KH	PC
A	1st ISSUE	07-12-22	
		KH	PC
REV.	REVISION DETAILS	DATE	DRAWN APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER CATCHMENT PLAN
SHEET 2

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD622	REVISION	B				



PHILIP COOK
CPEng#203738

NOTES:
1. SEE CONSTRUCTION NOTES DD002.

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	
		KH	PC
A	1st ISSUE	07-12-22	
		KH	PC
REV.	REVISION DETAILS	DRAWN APP.	

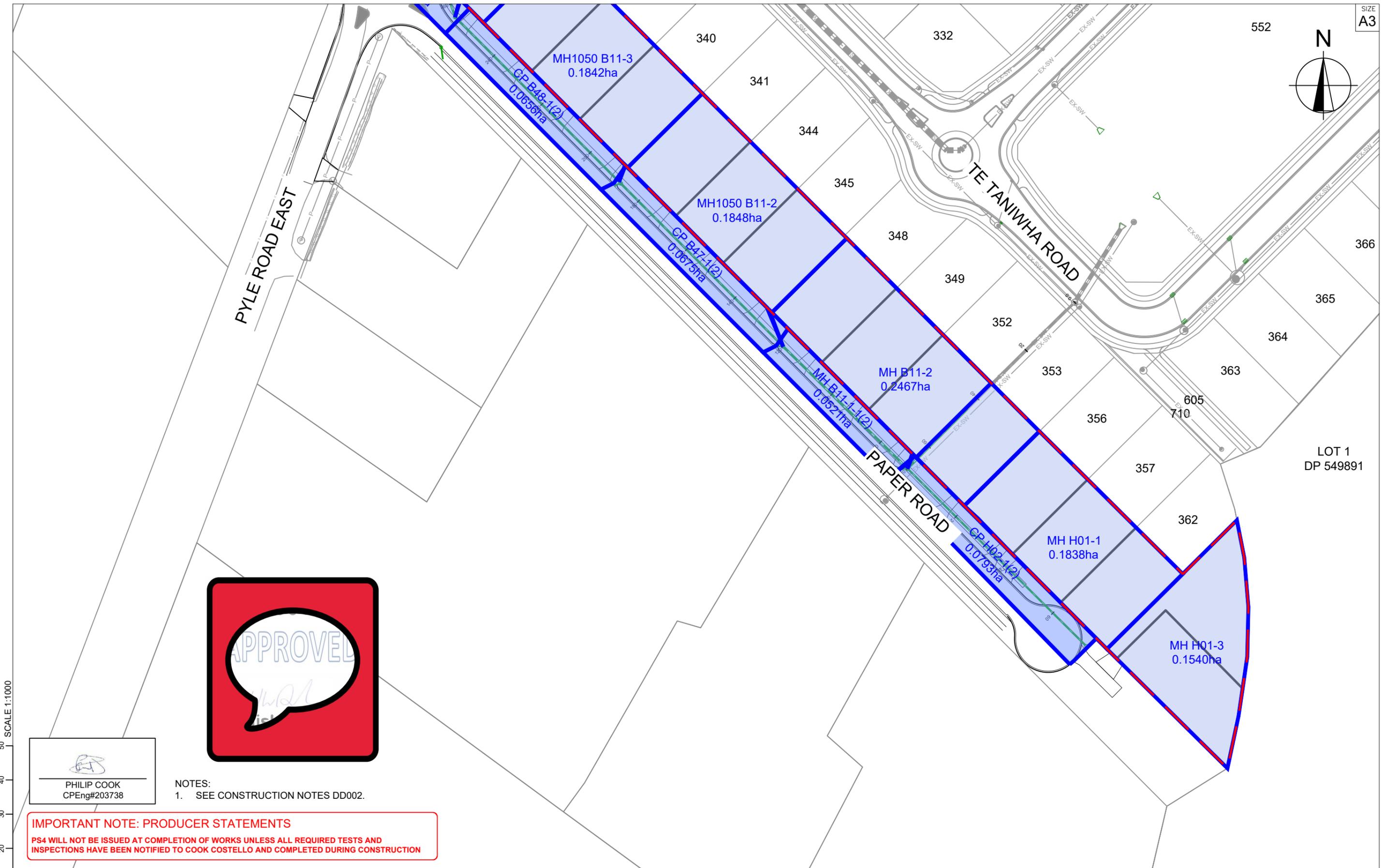
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER CATCHMENT PLAN
SHEET 3

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD623	REVISION B		

50 SCALE 1:1000
40
30
20
10
0

0 10 20 30 40 50 SCALE 1:1000



50 SCALE 1:1000
40
30
20
10
0


PHILIP COOK
CPEng#203738

NOTES:
1. SEE CONSTRUCTION NOTES DD002.

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

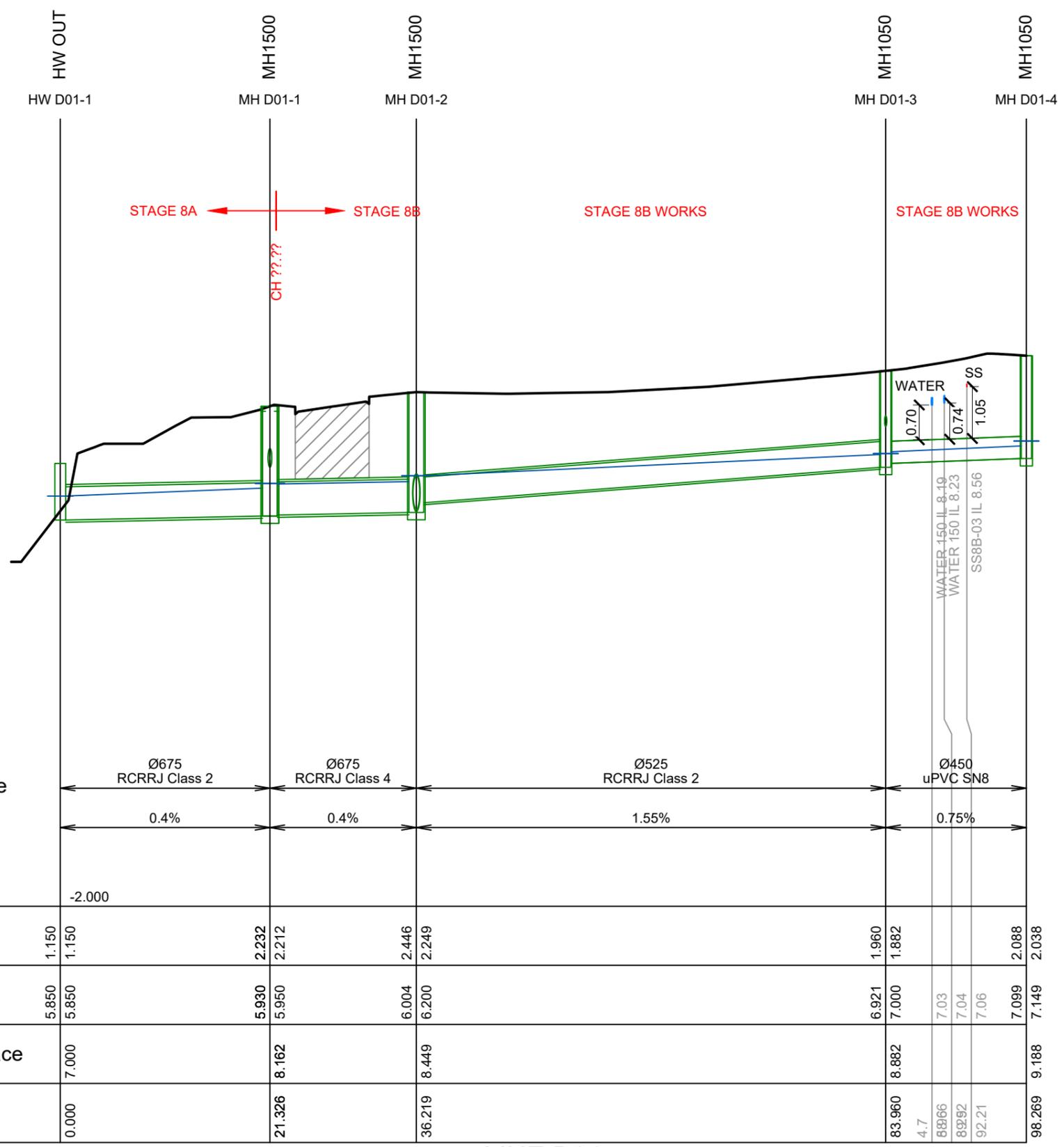
TITLE
STORMWATER CATCHMENT PLAN
SHEET 4

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD624	REVISION B		

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

BACKFILL 



Pipe Size/Type	Ø675 RCRRJ Class 2	Ø675 RCRRJ Class 4	Ø525 RCRRJ Class 2	Ø450 uPVC SN8
Grade (%)	0.4%	0.4%	1.55%	0.75%
Datum	-2.000			
Depth To Invert	1.150	2.232	2.446	1.960
Invert Levels	5.850	5.930	6.004	6.921
Finished Surface	7.000	8.162	8.449	8.882
Chainage	0.000	21.326	36.219	83.960

LINE D01

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


PHILIP COOK
CPEng#203738



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 1

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD630	REVISION	B				

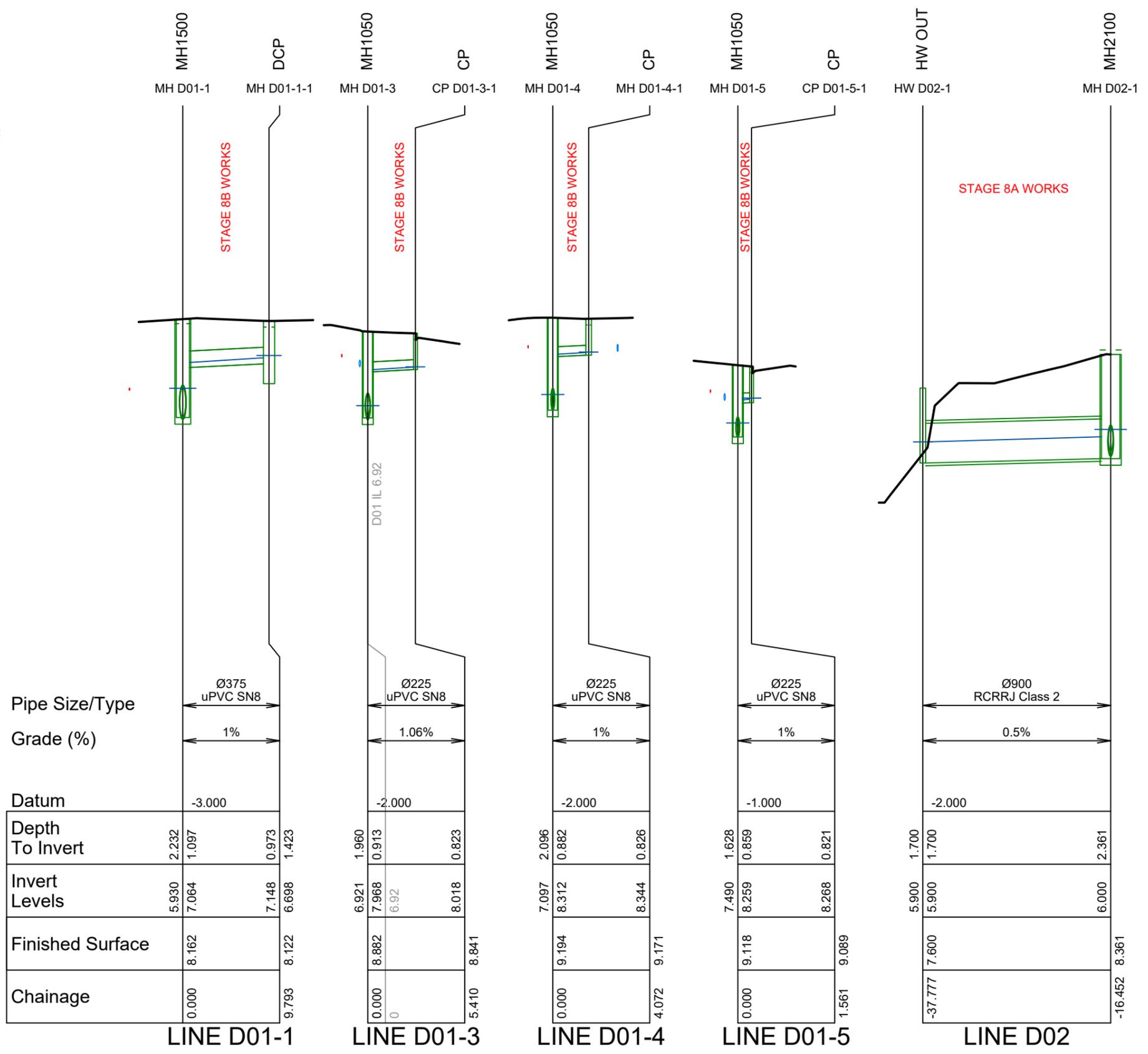
SCALE 1:100

SCALE 1:500

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL 

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


PHILIP COOK
CPEng#203738



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 3

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD632	REVISION	B				

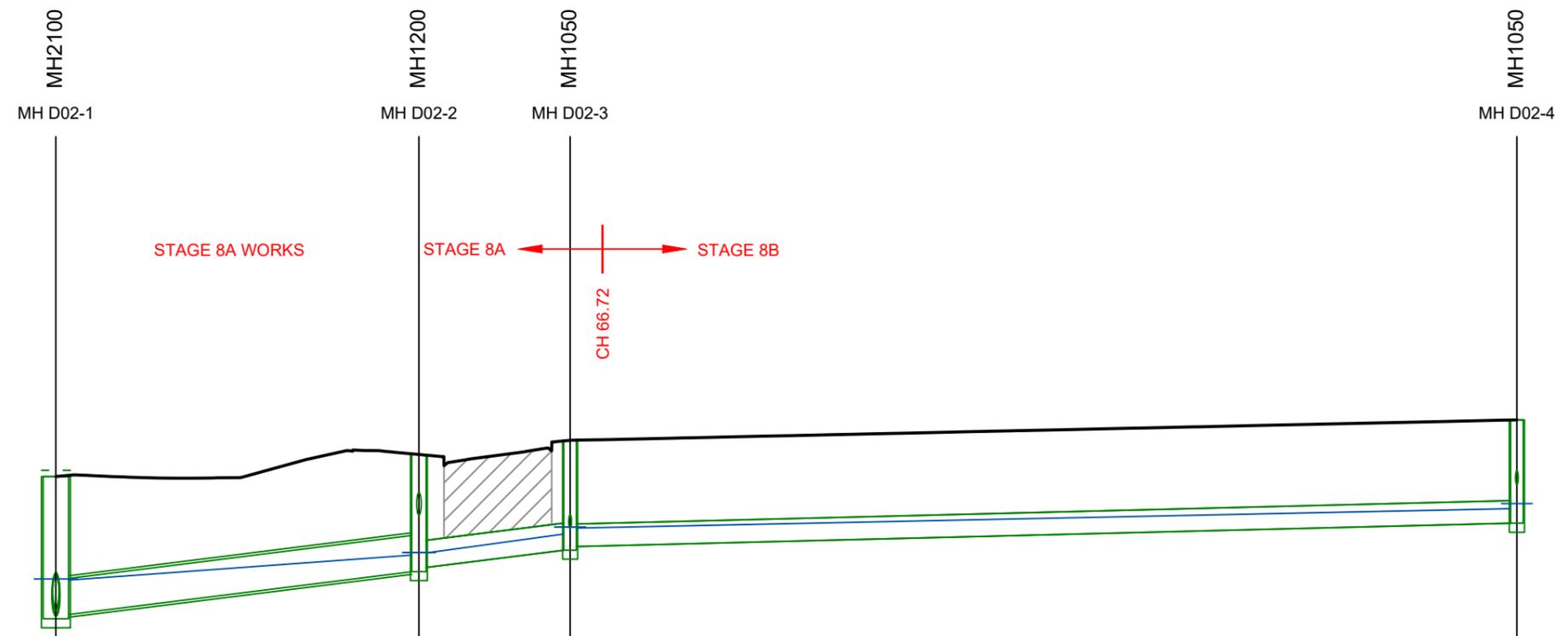
SCALE 1:100

SCALE 1:500

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL 

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



Pipe Size/Type	Ø600 RCRRJ Class 4	Ø450 uPVC SN16	Ø375 uPVC SN8
Grade (%)	2.5%	2.5%	0.5%
Datum	-2.000		
Depth To Invert	2.361 2.291	1.944 1.874	1.824 1.764
Invert Levels	6.000 6.070	6.782 6.852	7.138 7.198
Finished Surface	8.361	8.726	8.962
Chainage	-16.452	13.698	26.254

104.895 9.300

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

LINE D02 CONT.


PHILIP COOK
CPEng#203738



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 4

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD633	REVISION	B				

4 SCALE 1:100

0 2 4 SCALE 1:500

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

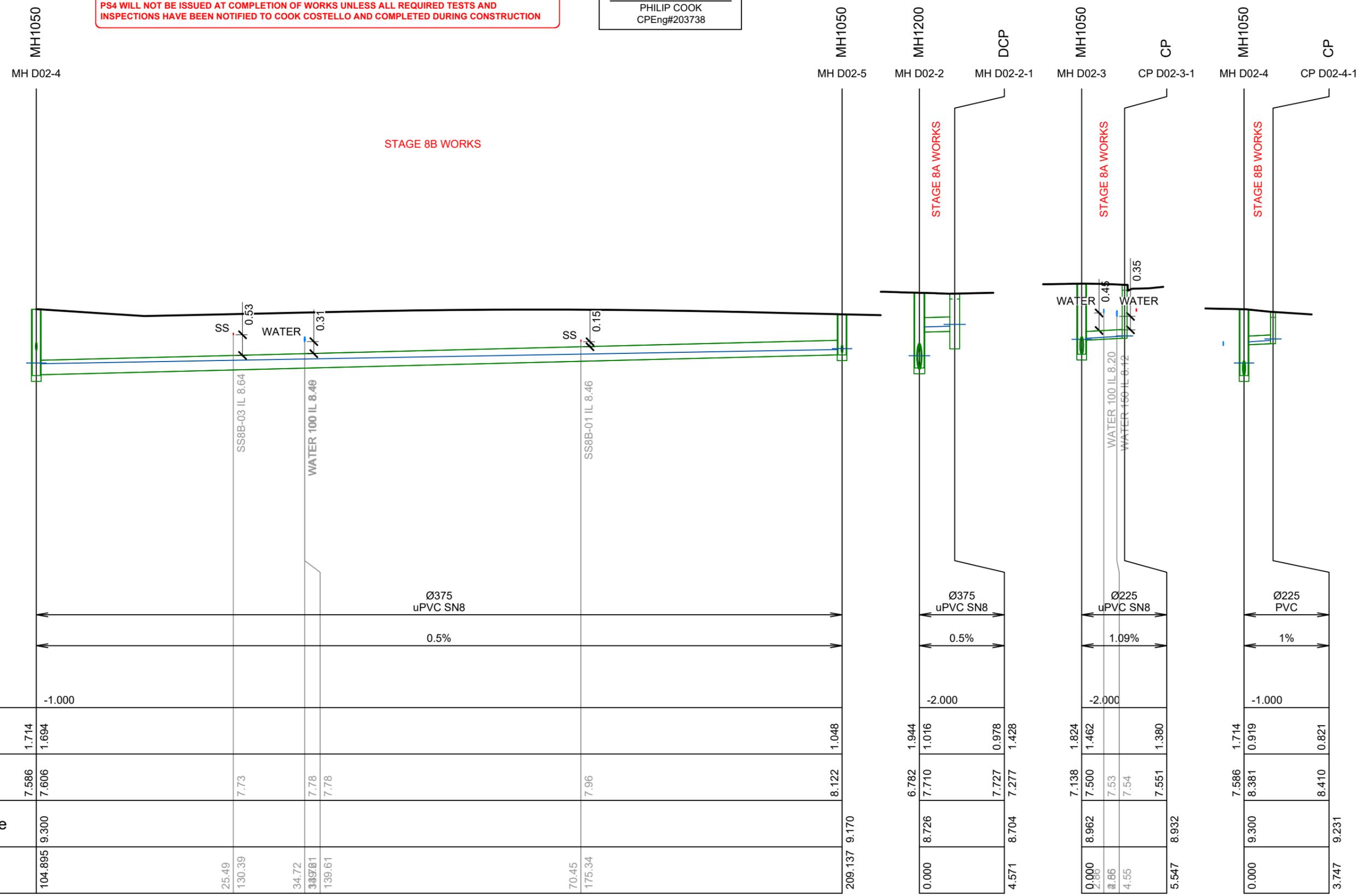
NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


PHILIP COOK
CPEng#203738

BACKFILL 

SCALE 1:100



Pipe Size/Type
Grade (%)
Datum

Chainage	Finished Surface	Invert Levels	Depth To Invert	Datum	Grade (%)	Pipe Size/Type
104.895	9.300	7.586	1.714	-1.000	0.5%	Ø375 uPVC SN8
25.49		7.73	1.694			
130.39		7.78				
34.72		7.78				
139.61		7.78				
70.45		7.96				
175.34		8.122	1.048			
209.137	9.170	8.122				
0.000	8.726	6.782	1.944	-2.000	0.5%	Ø375 uPVC SN8
2.000		7.710	1.016			
4.571	8.704	7.727	0.978			
4.571	8.704	7.277	1.428			
0.000	8.962	7.138	1.824	-2.000	1.09%	Ø225 uPVC SN8
2.000		7.500	1.462			
4.55		7.53				
5.547	8.932	7.551	1.380			
5.547	8.932	7.551	1.380			
0.000	9.300	7.586	1.714	-1.000	1%	Ø225 PVC
3.747		8.381	0.919			
3.747	9.231	8.410	0.821			

LINE D02 CONT.

LINE D02-2

LINE D02-3

LINE D02-4



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 5

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:500H 1:100V	STATUS FOR APPROVAL	
DWG NUMBER DD634			REVISION B

SCALE 1:500

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

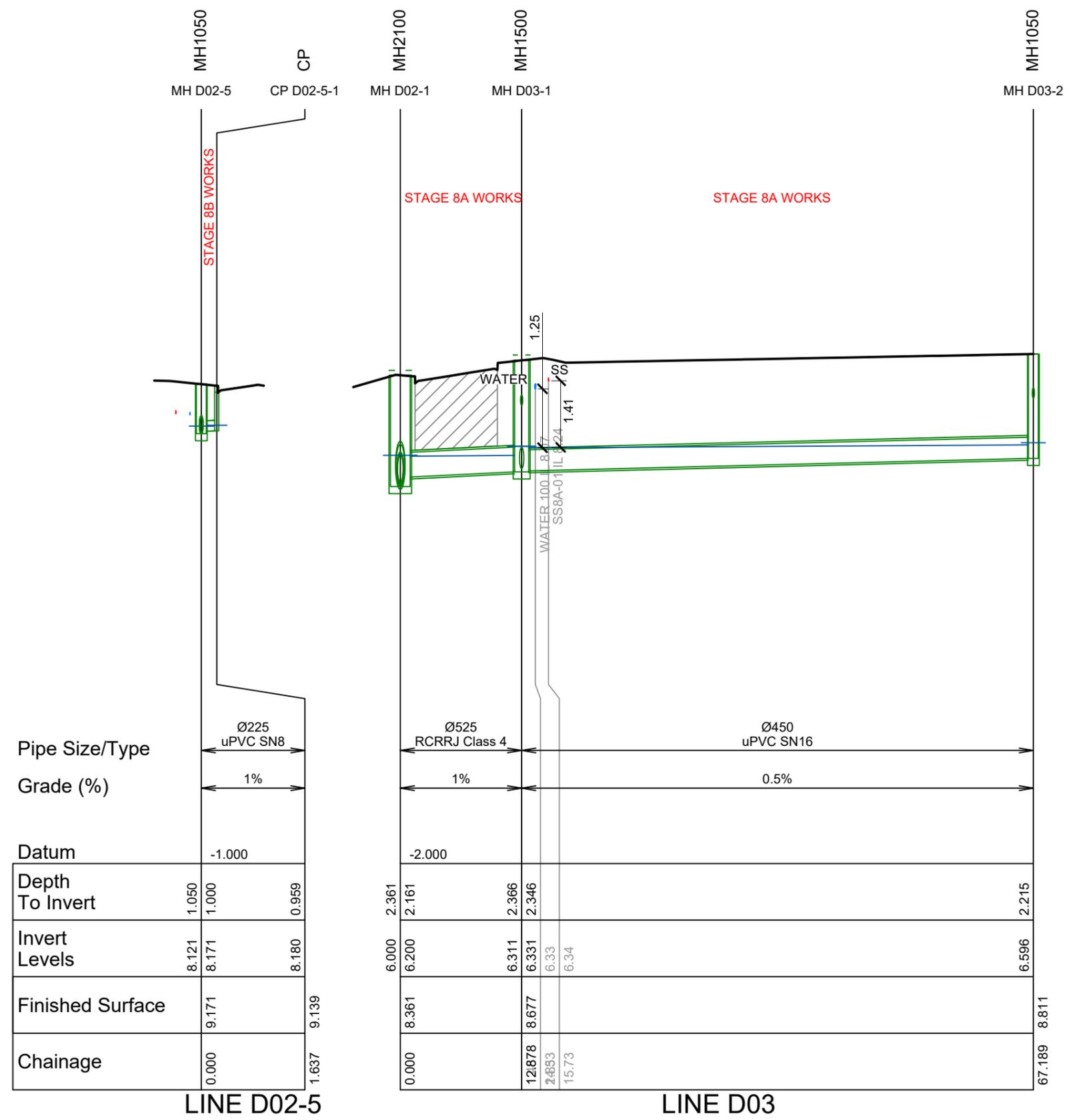
NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

BACKFILL 


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100



Pipe Size/Type	Ø225 uPVC SN8	
Grade (%)	1%	
Datum	-1.000	
Depth To Invert	1.050	0.959
Invert Levels	8.121	8.180
Finished Surface	9.171	9.139
Chainage	0.000	1.637

Pipe Size/Type	Ø525 RCRRJ Class 4		Ø450 uPVC SN16	
Grade (%)	1%		0.5%	
Datum	-2.000			
Depth To Invert	2.361	2.366		2.215
Invert Levels	6.000	6.311		6.596
Finished Surface	8.361	8.677		8.811
Chainage	0.000	12.878		67.189



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 6

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD635		REVISION	B			

SCALE 1:500

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

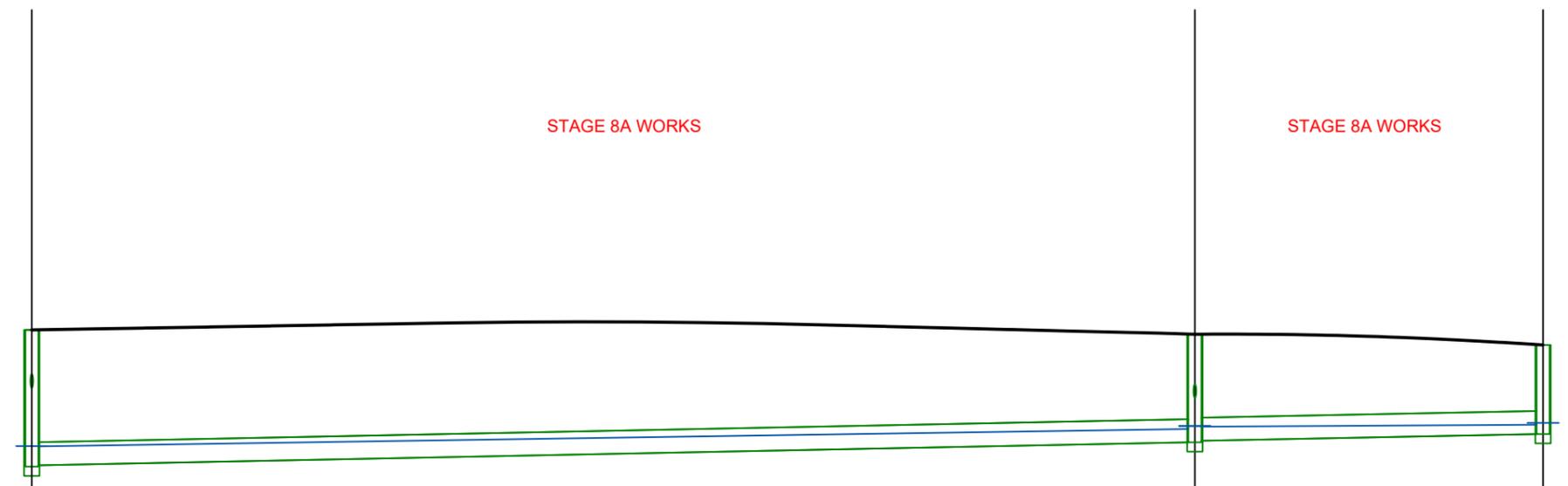
NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

BACKFILL 

MH1050
MH D03-2
MH1050
MH D03-3
MH1050
MH D03-4

STAGE 8A WORKS

STAGE 8A WORKS



Pipe Size/Type	Ø375 uPVC SN16		Ø375 uPVC SN16	
Grade (%)	0.4%		0.4%	

Datum	-2.000			
Depth To Invert	2.215	2.195	1.753	1.445
Invert Levels	6.596	6.616	6.989	7.123
Finished Surface	8.811		8.742	
Chainage	67.189		161.481	189.711

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100

LINE D03 CONT.


PHILIP COOK
CPEng#203738



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 7

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD636		REVISION	B			

SCALE 1:500

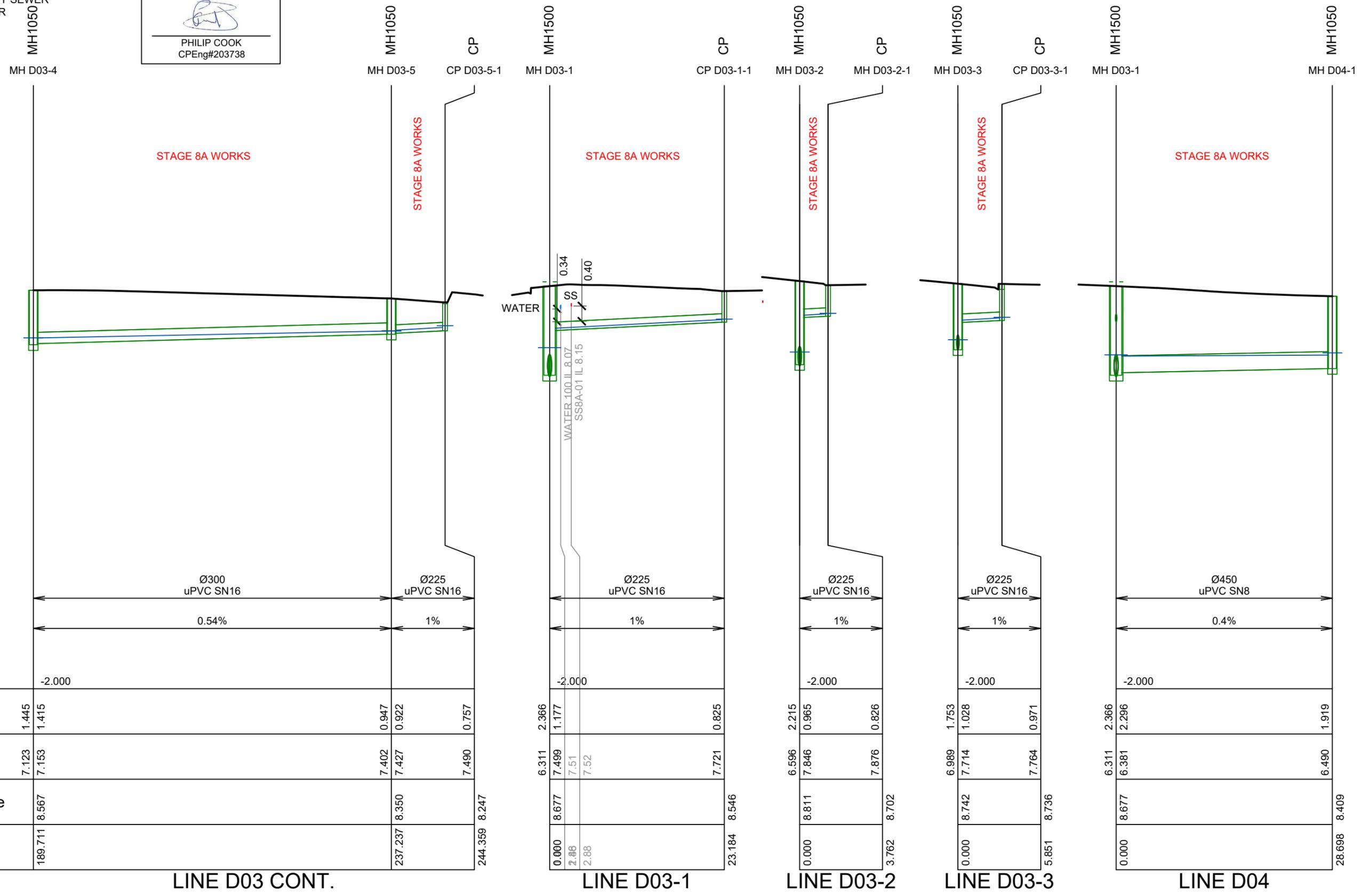
KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002


PHILIP COOK
CPEng#203738

BACKFILL 

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND
INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



Pipe Size/Type
Grade (%)

Datum

Depth To Invert	Invert Levels	Finished Surface	Chainage
1.445	7.123	8.567	189.711
1.415	7.153	8.567	189.711
0.947	7.402	8.350	237.237
0.922	7.427	8.350	237.237
0.757	7.490	8.247	244.359
0.825	7.721	8.546	23.184
0.965	7.846	8.811	0.000
0.826	7.876	8.702	3.762
0.971	7.764	8.742	0.000
0.971	7.764	8.702	3.762
1.919	6.490	8.677	0.000
1.919	6.490	8.409	28.698

LINE D03 CONT.

LINE D03-1

LINE D03-2

LINE D03-3

LINE D04



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 8

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:500H 1:100V	FOR APPROVAL	
DWG NUMBER	REVISION		
DD637	B		

SCALE 1:100

SCALE 1:500

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

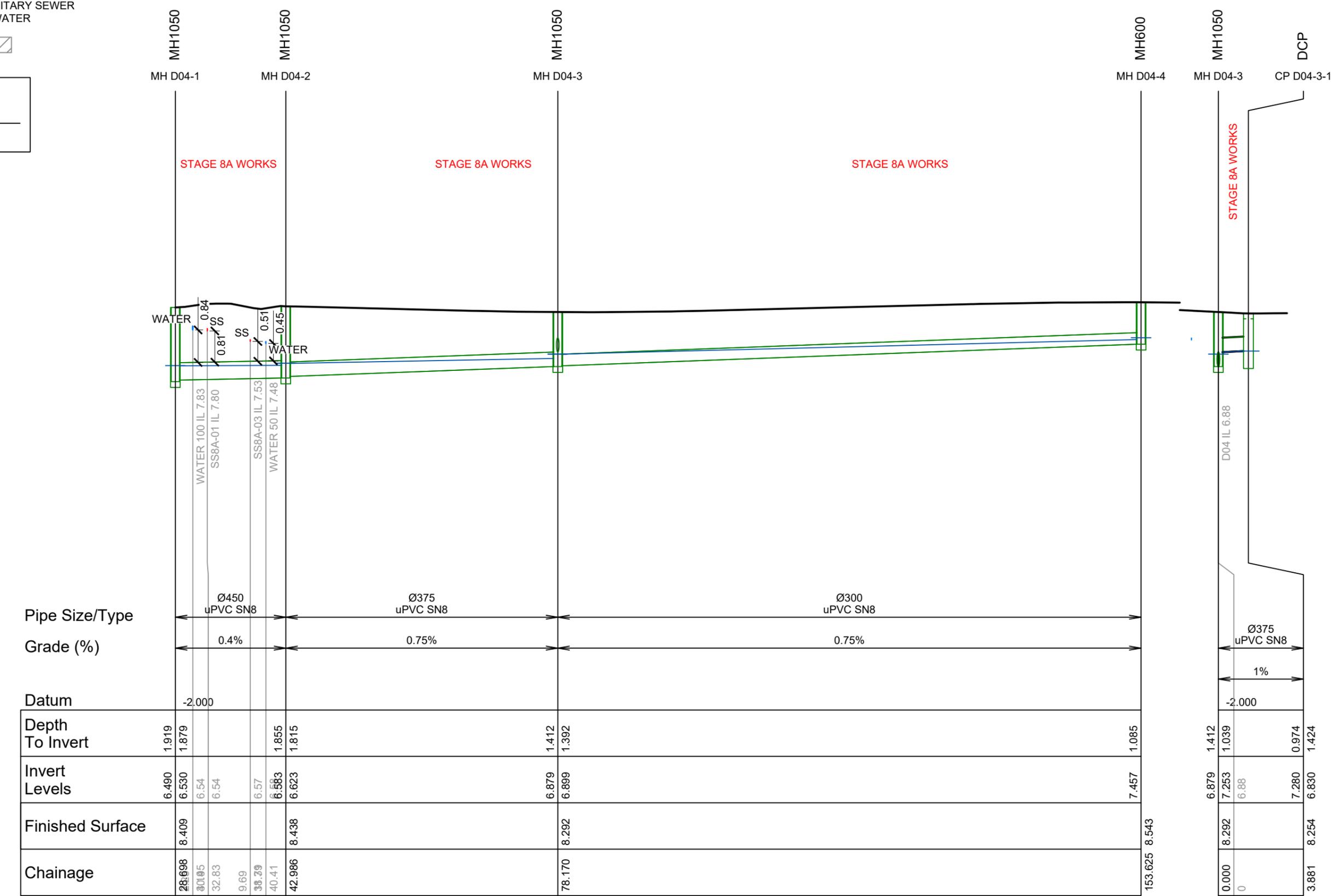
BACKFILL

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100

SCALE 1:500



LINE D04 CONT.

LINE D04-3



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED		17-03-23 KH PC
A	1st ISSUE		07-12-22 KH PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 9

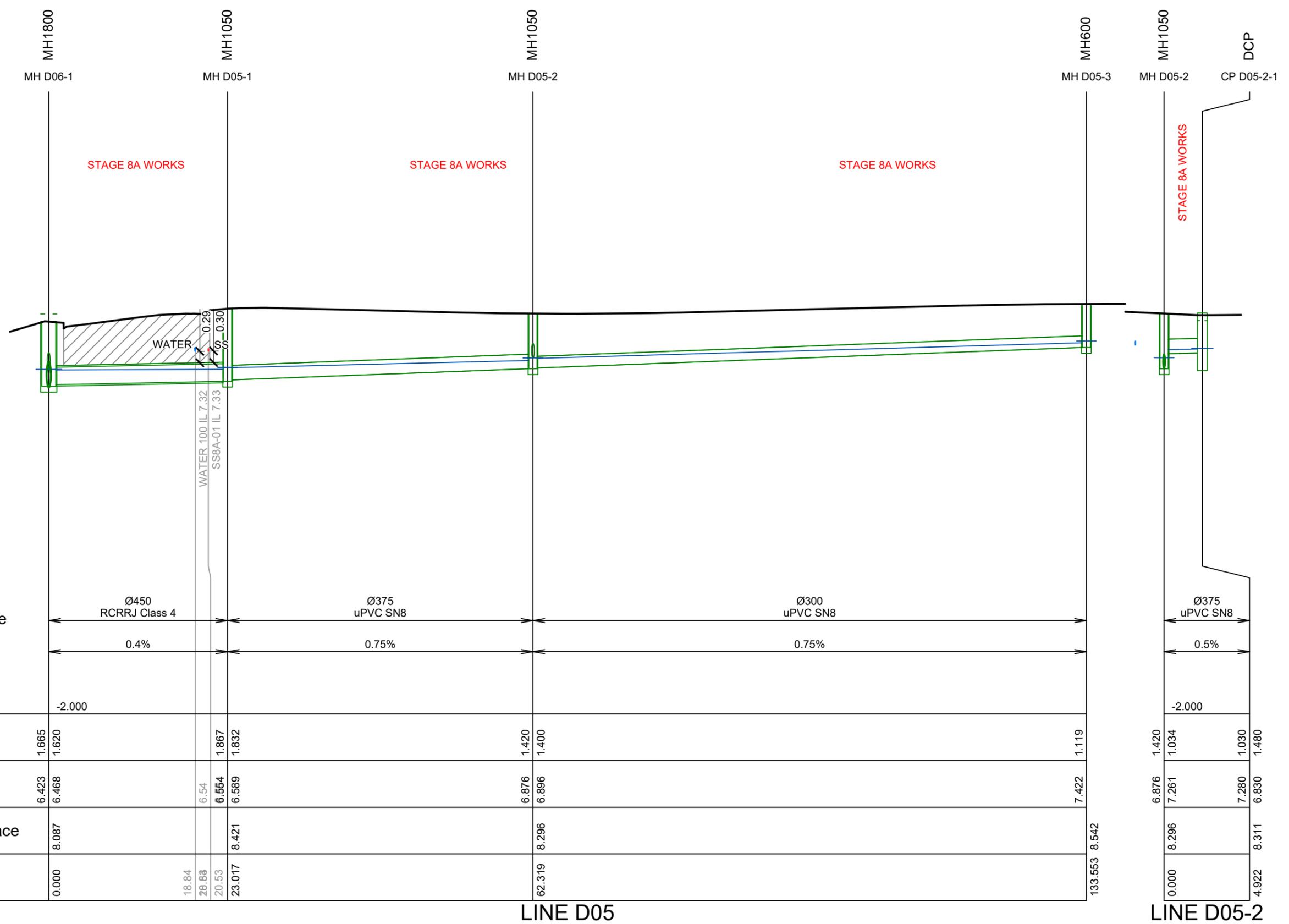
DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:500H 1:100V	STATUS FOR APPROVAL	
DWG NUMBER DD638			REVISION B

KEY:
EXSS = EXISTING SANITARY SEWER
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SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

BACKFILL 


PHILIP COOK
CPEng#203738



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

Pipe Size/Type	Ø450 RCRRJ Class 4	Ø375 uPVC SN8	Ø300 uPVC SN8	Ø375 uPVC SN8
Grade (%)	0.4%	0.75%	0.75%	0.5%
Datum	-2.000			-2.000
Depth To Invert	1.665 1.620	1.867 1.832	1.420 1.400	1.420 1.034 1.030 1.480
Invert Levels	6.423 6.468	6.54 6.554 6.589	6.876 6.896	6.876 7.261 7.280 6.830
Finished Surface	8.087	8.421	8.296	8.296 8.311 8.542
Chainage	0.000	18.84 20.53 23.017	62.319	0.000 4.922

LINE D05

LINE D05-2

SCALE 1:100



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 10

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD639		REVISION	B			

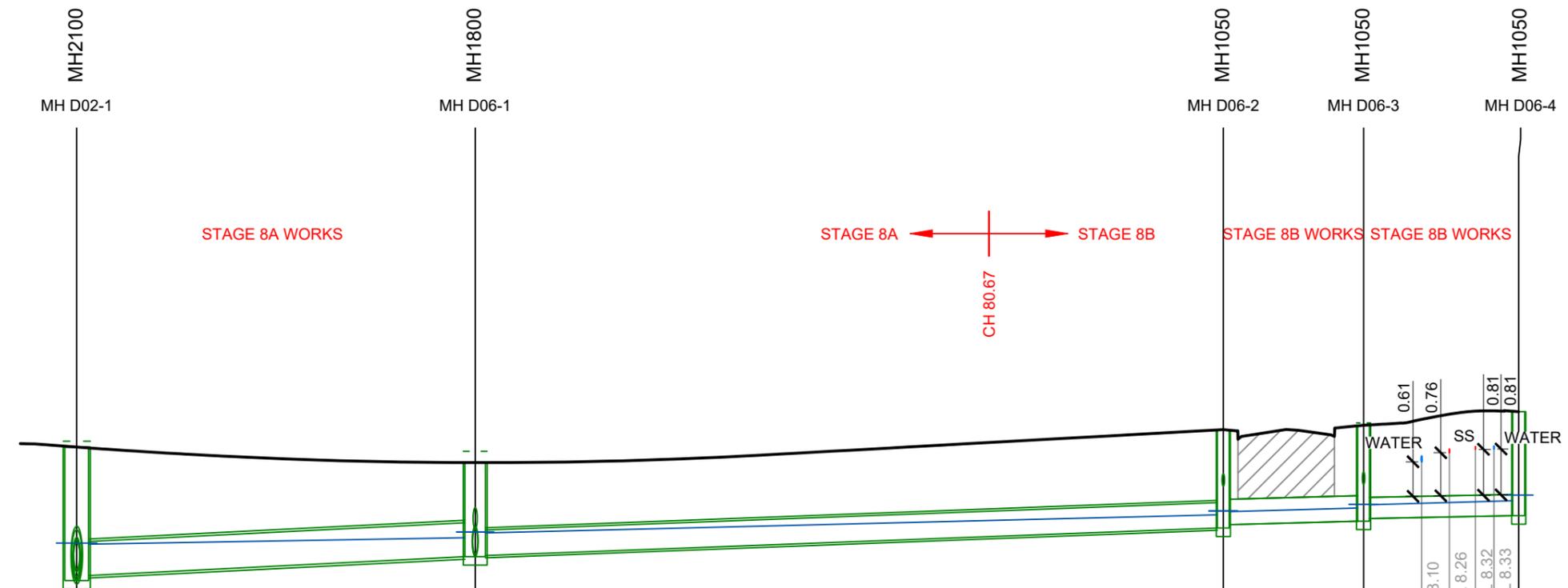
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KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

BACKFILL 


PHILIP COOK
CPEng#203738



Pipe Size/Type	Ø600 RCRRJ Class 2	Ø450 uPVC SN8	Ø450 uPVC SN16	Ø375 uPVC SN8
Grade (%)	1%	0.75%	0.55%	0.4%
Datum	-2.000			
Depth To Invert	2.361 2.271	1.665 1.645	1.741 1.681	1.696 1.651
Invert Levels	6.000 6.090	6.423 6.443	6.928 6.988	7.051 7.096
Finished Surface	8.361	8.087	8.669	8.747
Chainage	0.000	35.235	101.394	113.799
			125.515	127.515

LINE D06

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 11

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD640		REVISION	B			

SCALE 1:500

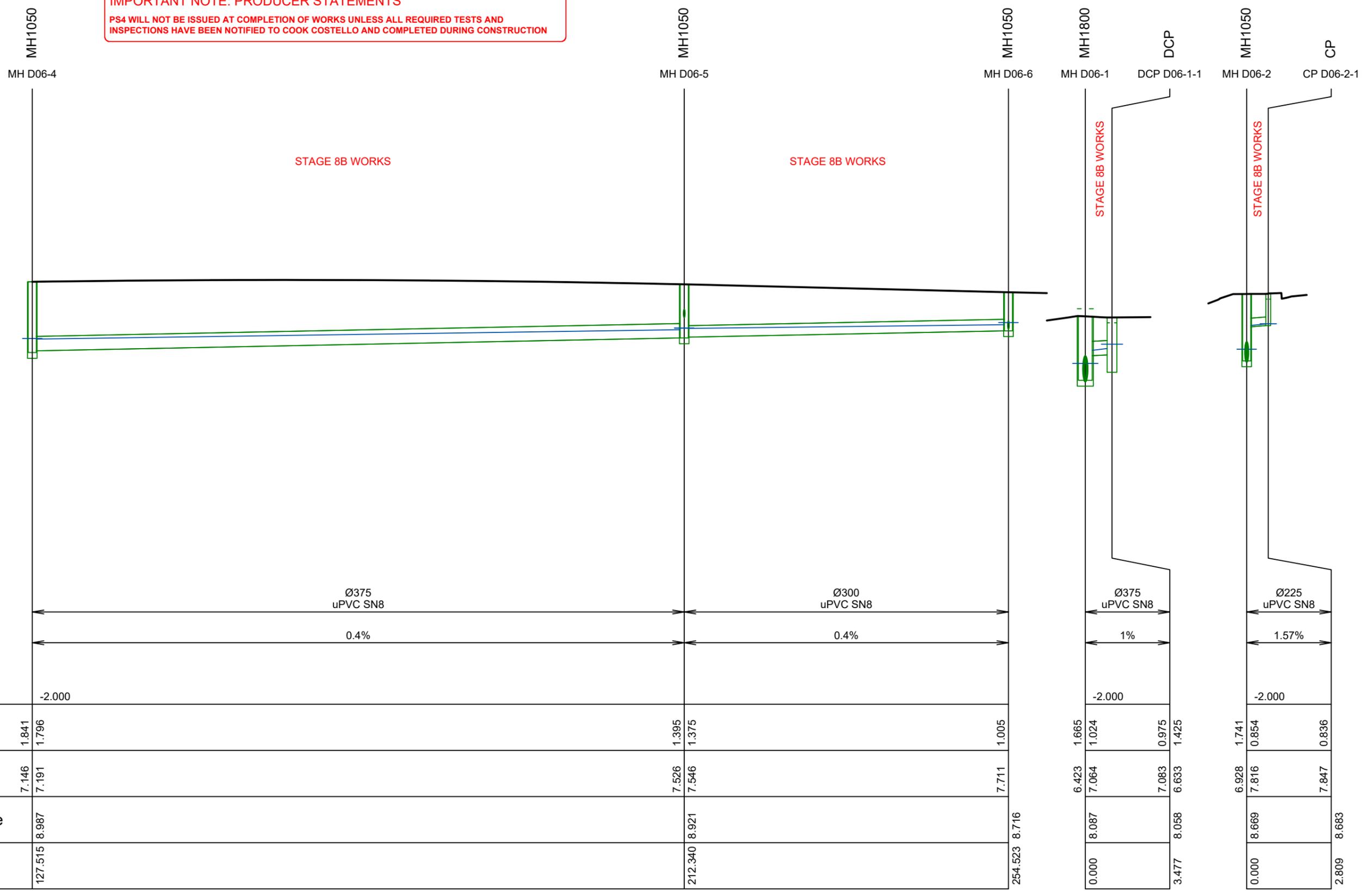
KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

BACKFILL

PHILIP COOK
CPEng#203738



Pipe Size/Type

Grade (%)

Datum

	MH1050	MH1050	MH1050	MH1800	DCP	MH1050	CP
Depth To Invert	1.841 1.796	1.395 1.375	1.005	1.665 1.024	0.975 1.425	1.741 0.854	0.836
Invert Levels	7.146 7.191	7.526 7.546	7.711	6.423 7.064	7.083 6.633	6.928 7.816	7.847
Finished Surface	8.987	8.921	8.716	8.087	8.058	8.669	8.683
Chainage	127.515	212.340	254.523	0.000	3.477	0.000	2.809

LINE D06 CONT.

LINE D06-1

LINE D06-2



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 12

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:500H 1:100V	STATUS FOR APPROVAL	
DWG NUMBER DD641			REVISION B

SCALE 1:100

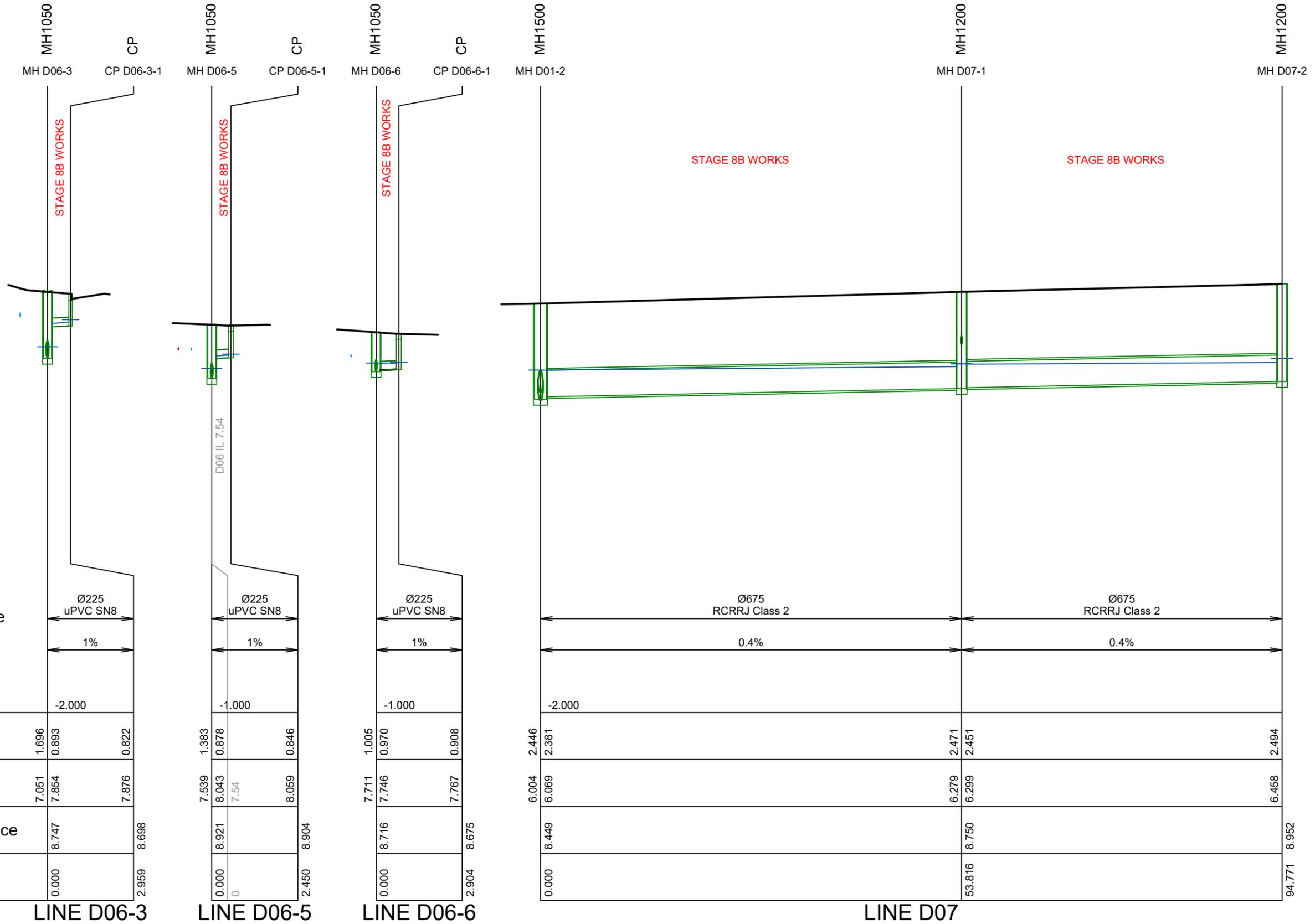
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KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

BACKFILL 


PHILIP COOK
CPEng#203738



IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

Pipe Size/Type	Grade (%)	Datum	Depth To Invert	Invert Levels	Finished Surface	Chainage
Ø225 uPVC SN8	1%	-2.000	1.696 0.893	7.051 7.854	8.747	0.000 2.959
Ø225 uPVC SN8	1%	-1.000	1.383 0.878	7.539 8.043	8.921	0.000 2.450
Ø225 uPVC SN8	1%	-1.000	1.005 0.970	7.711 7.746	8.716	0.000 2.904
Ø675 RCRRJ Class 2	0.4%	-2.000	2.446 2.381	6.004 6.069	8.449	0.000
Ø675 RCRRJ Class 2	0.4%	-2.000	2.471 2.451	6.279 6.299	8.750	53.816
			2.494	6.458		94.771

SCALE 1:100

SCALE 1:500

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C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 13

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD642		REVISION	B			

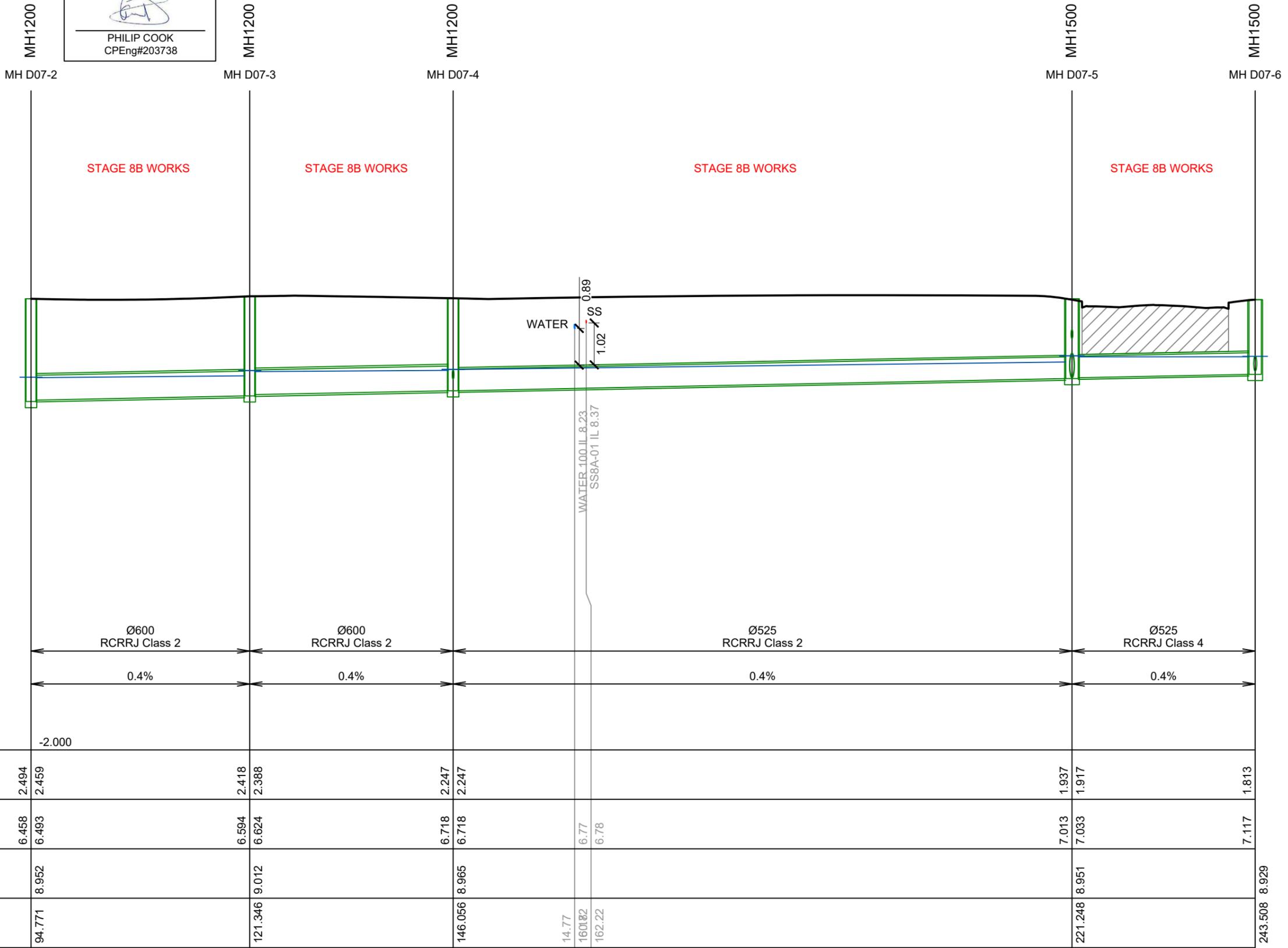
KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002


PHILIP COOK
CPEng#203738

BACKFILL 

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND
INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



Pipe Size/Type	← Ø600 RCRRJ Class 2	← Ø600 RCRRJ Class 2	← Ø525 RCRRJ Class 2	← Ø525 RCRRJ Class 4
Grade (%)	← 0.4%	← 0.4%	← 0.4%	← 0.4%
Datum	-2.000			
Depth To Invert	2.494 2.459	2.418 2.388	2.247 2.247	1.937 1.917
Invert Levels	6.458 6.493	6.594 6.624	6.718 6.718	7.013 7.033
Finished Surface	8.952	9.012	8.965	8.951
Chainage	94.771	121.346	146.056	221.248

LINE D07 CONT.

SCALE 1:100



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 14

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD643		REVISION	B			

SCALE 1:500

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

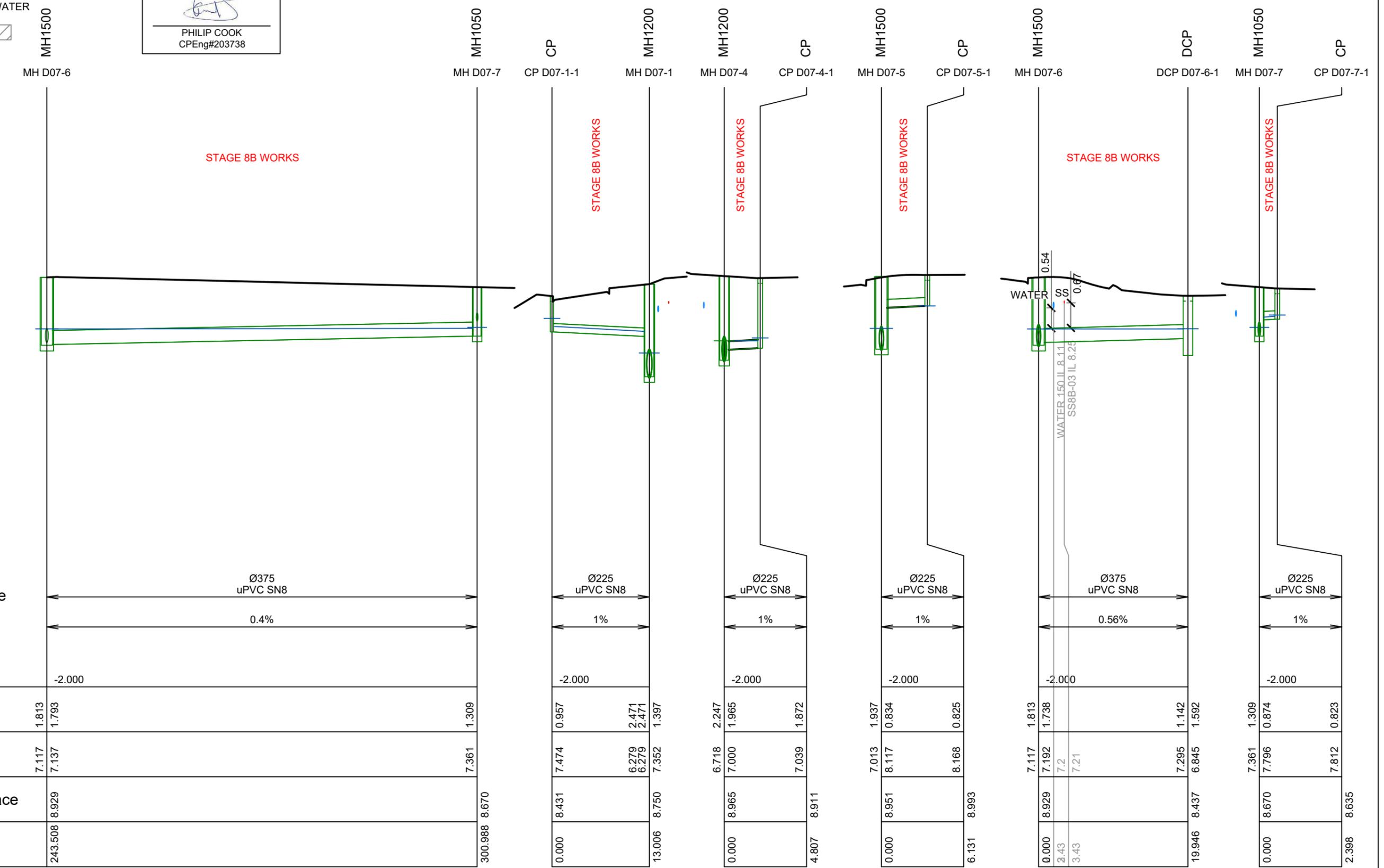

PHILIP COOK
CPEng#203738

BACKFILL 

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND
INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100

SCALE 1:500



Pipe Size/Type	Grade (%)	Datum	Depth To Invert	Invert Levels	Finished Surface	Chainage
Ø375 uPVC SN8	0.4%	-2.000	1.813 1.793	7.117 7.137	8.929	243.508
Ø225 uPVC SN8	1%	-2.000	0.957 2.471 2.471	7.474 6.279 6.279	8.431	0.000
Ø225 uPVC SN8	1%	-2.000	2.247 1.965	6.718 7.000	8.965	0.000
Ø225 uPVC SN8	1%	-2.000	1.937 0.834	7.013 8.117	8.951	0.000
Ø375 uPVC SN8	0.56%	-2.000	1.142 1.592	7.295 6.845	8.437	19.946
Ø225 uPVC SN8	1%	-2.000	1.309 0.874	7.361 7.796	8.670	0.000
Ø225 uPVC SN8	1%	-2.000	0.823	7.812	8.635	2.398

LINE D07 CONT. LINE D07-1 LINE D07-4 LINE D07-5 LINE D07-6 LINE D07-7



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED		
A	1st ISSUE		

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 15

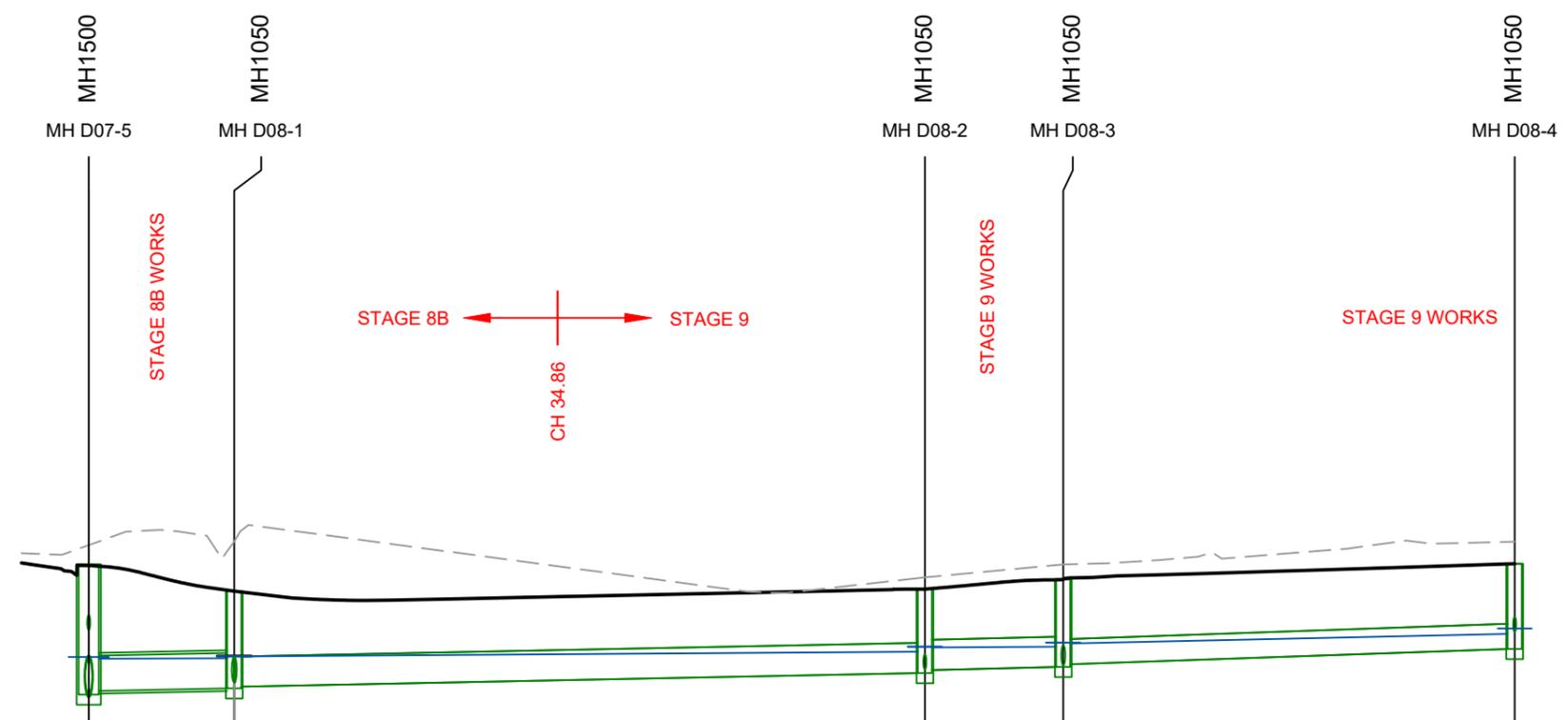
DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD644		REVISION	B			

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

BACKFILL 


PHILIP COOK
CPEng#203738



Pipe Size/Type	Ø525 RCRRJ Class 2	Ø450 uPVC SN8	Ø450 uPVC SN8	Ø375 uPVC SN10
Grade (%)	0.4%	0.4%	0.5%	0.7%
Datum	-1.000			
Depth To Invert	1.937 1.882	1.443 1.418	1.248 1.203	1.303 1.263
Invert Levels	7.013 7.068	7.107 7.132 7.11	7.333 7.378	7.424 7.464
Finished Surface	8.951	8.550	8.581	8.727
Chainage	0.000	10.82 10.82 10.819 10.82	62.167	72.453

LINE D08

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD645		REVISION	B			

SCALE 1:500

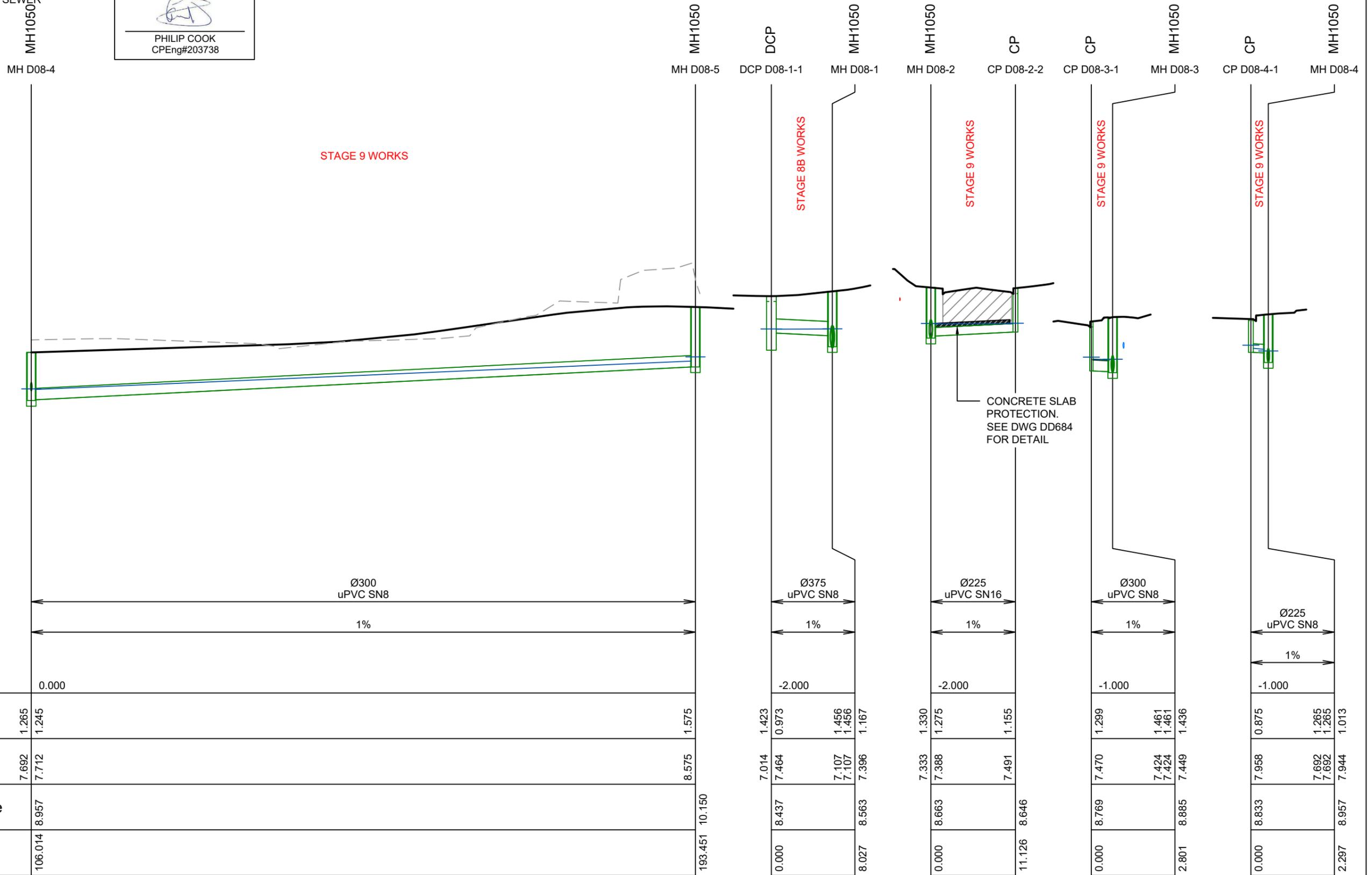
KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002


PHILIP COOK
CPEng#203738

BACKFILL 

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND
INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



Pipe Size/Type
Grade (%)

Datum	0.000	
Depth To Invert	1.265 1.245	1.575
Invert Levels	7.692 7.712	8.575
Finished Surface	8.957	10.150
Chainage	106.014	193.451

LINE D08 CONT.

LINE D08-1

LINE D08-2

LINE D08-3

LINE D08-4



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 17

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD646		REVISION	B			

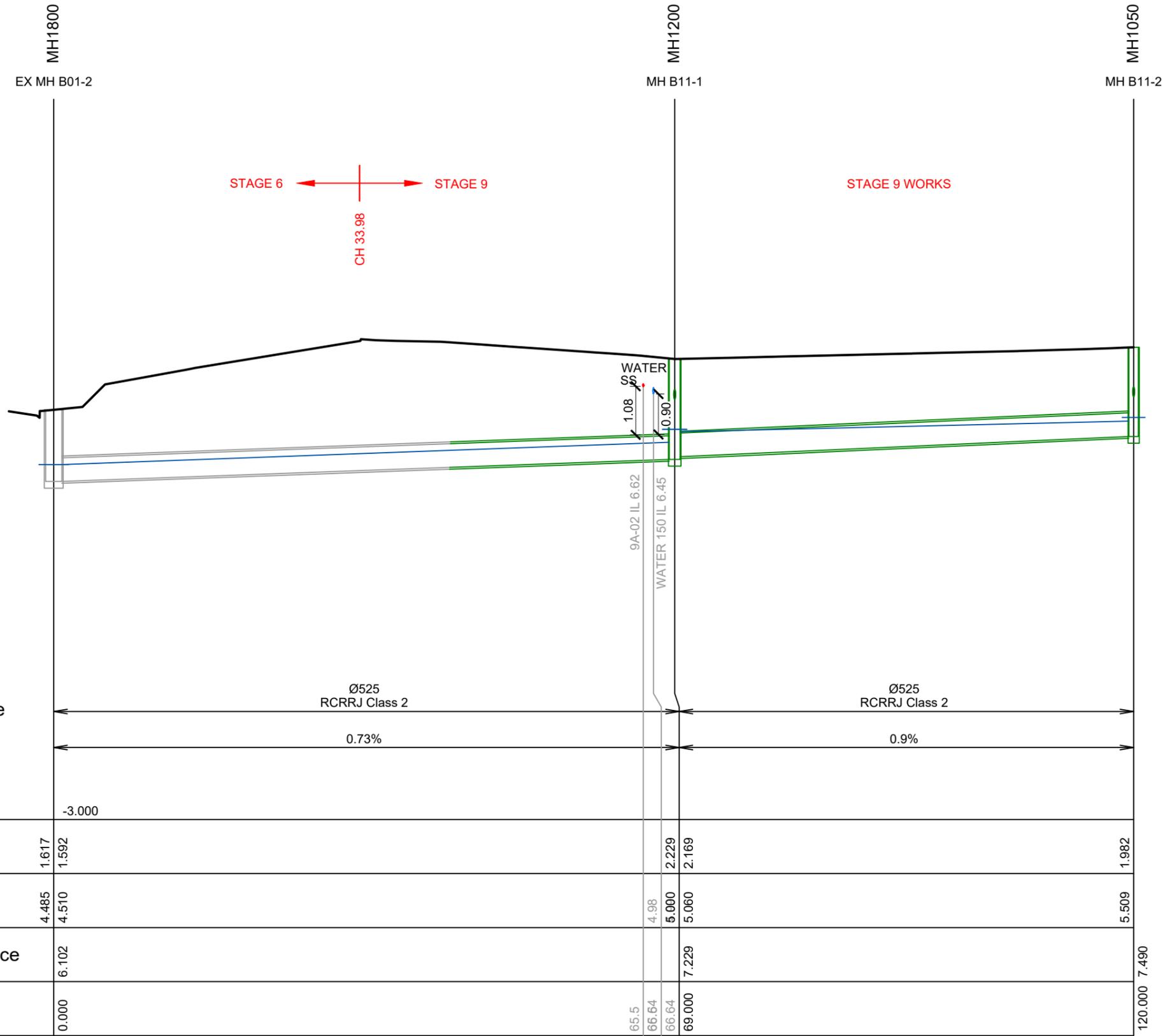
SCALE 1:100

SCALE 1:500

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL 

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100

LINE B11


PHILIP COOK
CPEng#203738



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 18

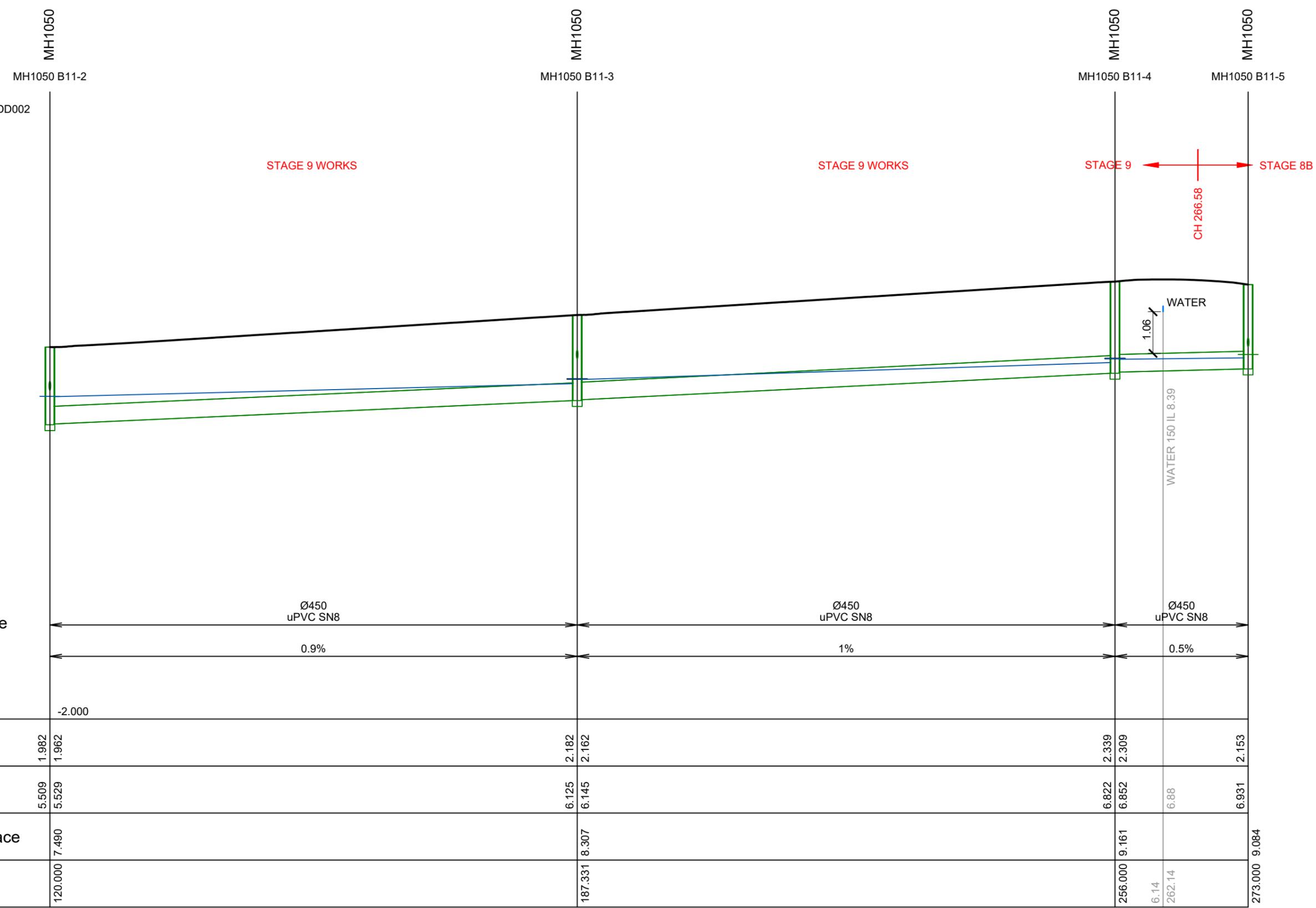
DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD647		REVISION	B			

KEY:
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WATER = POTABLE WATER

BACKFILL 

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002


PHILIP COOK
CPEng#203738



Pipe Size/Type	Ø450 uPVC SN8	Ø450 uPVC SN8	Ø450 uPVC SN8
Grade (%)	0.9%	1%	0.5%

Datum	-2.000		
Depth To Invert	1.982 1.962	2.182 2.162	2.339 2.309
Invert Levels	5.509 5.529	6.125 6.145	6.822 6.852
Finished Surface	7.490	8.307	9.161
Chainage	120.000	187.331	256.000

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

LINE B11 CONT.



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 19

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD648		REVISION	B			

SCALE 1:100

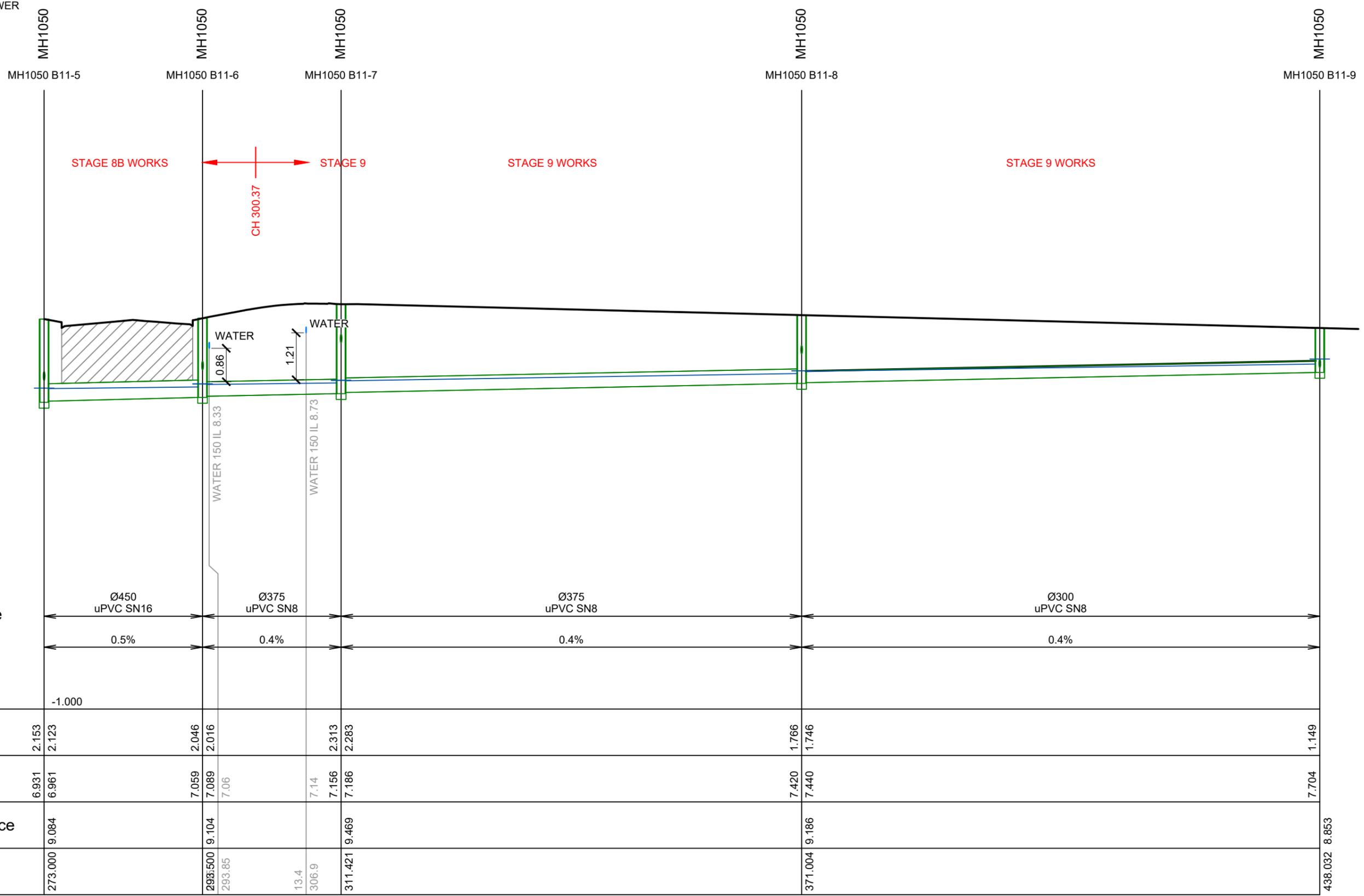
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KEY:
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SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

BACKFILL 


PHILIP COOK
CPEng#203738



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100

LINE B11 CONT.

 www.coco.co.nz Whangarei Auckland Wellington Christchurch	C		PROJECT DETAILS	TITLE	DATE CREATED	DRAWN	DESIGNED	APPROVED
	B	PLAN SET UPDATED	17-03-23	WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	07/12/2022	K HANSARD	R BROOKES	P COOK
	A	1st ISSUE	07-12-22	STORMWATER LONGSECTIONS SHEET 20	CCL REF NO	SCALE	STATUS	REVISION
	REV.	REVISION DETAILS	DRAWN APP.		14333-009	1:500H 1:100V	FOR APPROVAL	B
					DWG NUMBER	DD649		

SCALE 1:500

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WATER = POTABLE WATER

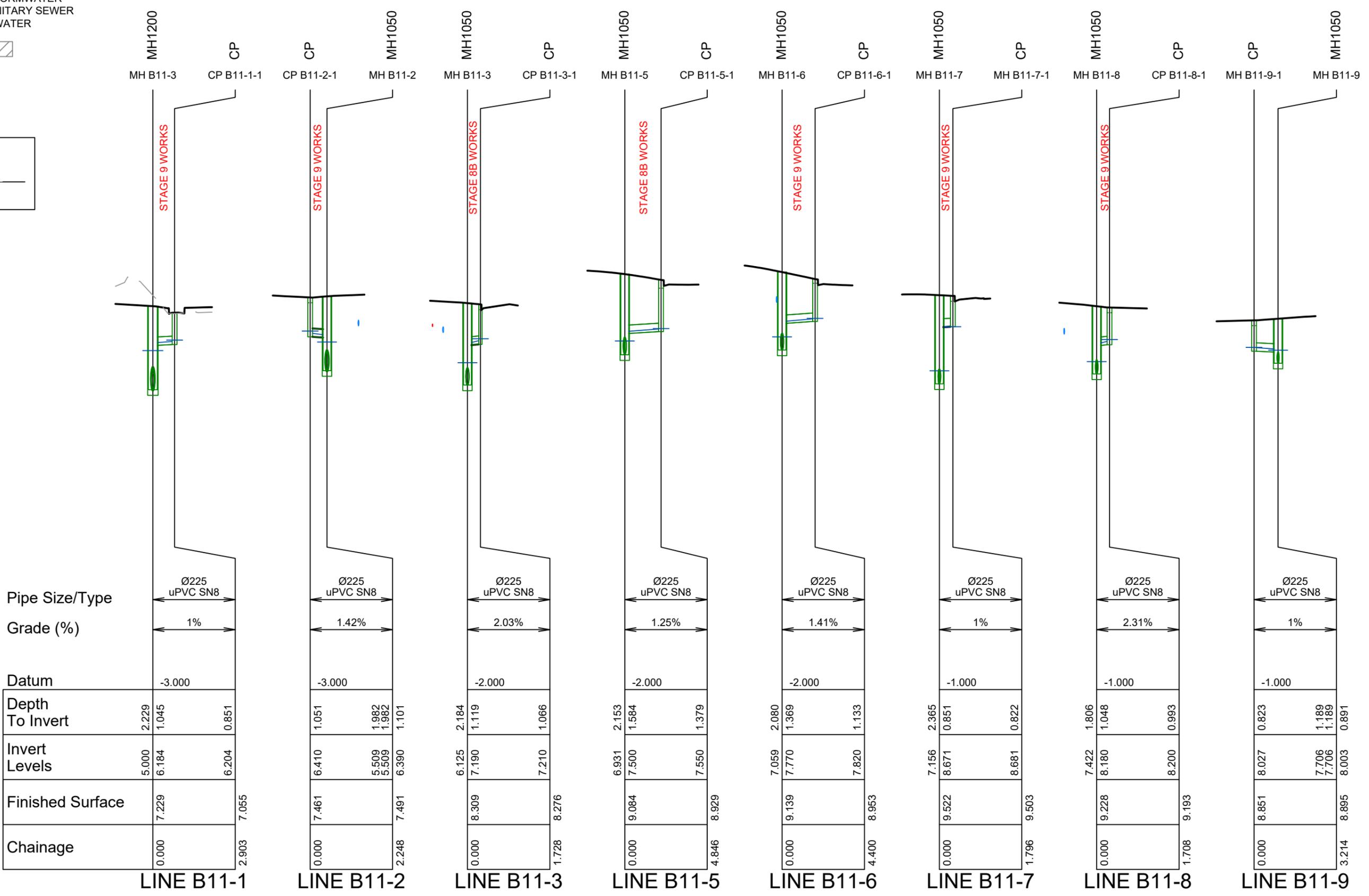
NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

BACKFILL 


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

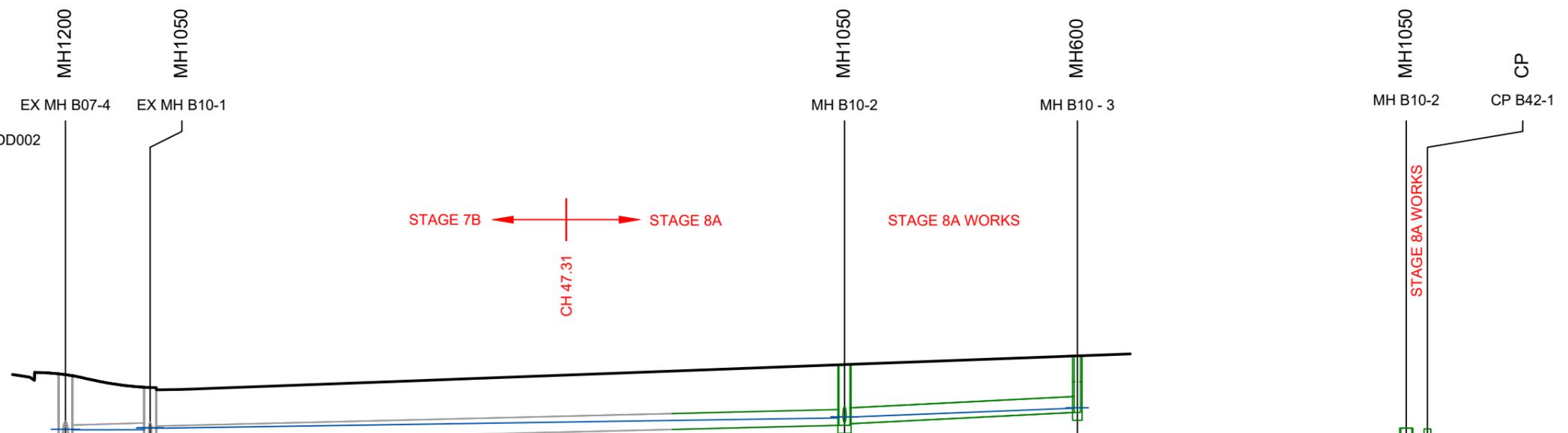
TITLE
STORMWATER LONGSECTIONS
SHEET 21

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD650		REVISION	B			

KEY:
EXSS = EXISTING SANITARY SEWER
EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL 

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



Pipe Size/Type	Ø450 uPVC SN8	Ø300 uPVC SN8	Ø300 uPVC SN8
Grade (%)	0.58%	0.49%	1.02%
Datum	-2.000		
Depth To Invert	1.448 1.403		1.147 1.117
HGL Levels	6.897 6.976 6.965		7.190 7.210 7.206
Invert Levels	6.560 6.605 6.61 6.62	6.88	7.050 7.080
Finished Surface	8.008		8.197
Chainage	0.000 2.73 3.73	29.72 37.72	73.600 95.600

LINE B10

Pipe Size/Type	Ø225 uPVC SN8
Grade (%)	0.86%
Datum	-2.000
Depth To Invert	1.147 1.097
Invert Levels	7.050 7.100
Finished Surface	8.197
Chainage	0.000 2.000

LINE B42

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100



C		
B	PLAN SET UPDATED	17-03-23 KH PC
A	1st ISSUE	07-12-22 KH PC
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 22

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD651	REVISION	B				


PHILIP COOK
CPEng#203738

KEY:
EXSS = EXISTING SANITARY SEWER
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SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

BACKFILL 



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

Pipe Size/Type	Ø375 uPVC SN8	Ø300 uPVC SN8	Ø300 uPVC SN8
Grade (%)	0.58%	0.51%	0.62%
Datum	-2.000		
Depth To Invert	1.437 1.368		1.199 1.199
HGL Levels	6.814 6.885 6.873		7.140 7.160 7.156
Invert Levels	6.471 6.540 6.55 6.55 6.56	6.82	7.000 7.000
Finished Surface	7.908		8.199
Chainage	0.000 2.69 2.85 4.35	29.02 37.02	73.000 98.000

LINE B09

Pipe Size/Type	Ø225 uPVC SN8
Grade (%)	0.86%
Datum	-2.000
Depth To Invert	1.199 1.129
Invert Levels	7.000 7.070
Finished Surface	8.199
Chainage	0.000 2.000

LINE B41


PHILIP COOK
CPEng#203738

SCALE 1:100



C		
B	PLAN SET UPDATED	17-03-23 KH PC
A	1st ISSUE	07-12-22 KH PC
REV.	REVISION DETAILS	DRAWN APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 23

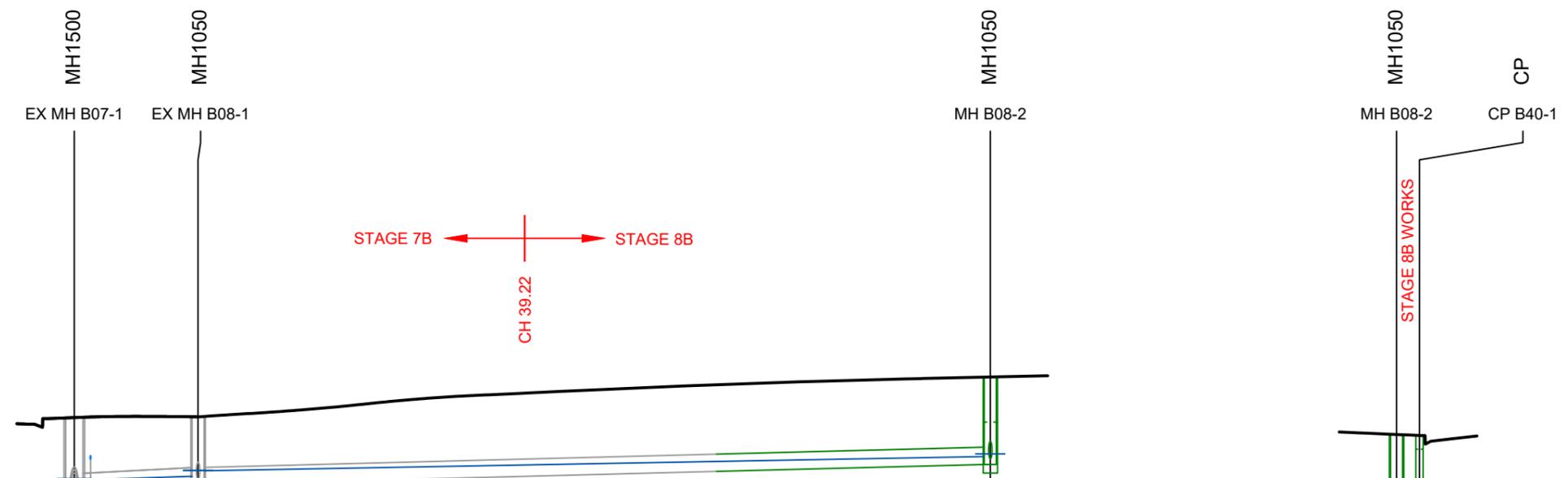
DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD652	REVISION	B				

SCALE 1:500

KEY:
EXSS = EXISTING SANITARY SEWER
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SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL 

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



	MH1500	MH1050	MH1050	MH1050
Pipe Size/Type	Ø375 uPVC SN8	Ø300 uPVC SN8		
Grade (%)	1.05%	0.52%		
Datum	-2.000			
Depth To Invert	1.641 1.346	1.258 1.178		1.522
HGL Levels	6.618 6.754 6.792	6.794 6.896 6.890		7.138 7.184
Invert Levels	6.175 6.470 6.48 6.5	6.570 6.650	6.79	7.000 7.184
Finished Surface	7.816	7.828		8.522
Chainage	0.000 3.76 8.78 8.78	10.782	28.44 39.22	79.767 8.522

LINE B08

	MH1050	CP
Pipe Size/Type	Ø225 uPVC SN8	
Grade (%)	1.73%	
Datum	-1.000	
Depth To Invert	1.522 1.422	1.384
HGL Levels	7.138 7.184 7.181	7.181 7.184
Invert Levels	7.000 7.100	7.120
Finished Surface	8.522	8.504
Chainage	0.000	2.000

LINE B40

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100


PHILIP COOK
CPEng#203738



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED		
A	1st ISSUE		

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 24

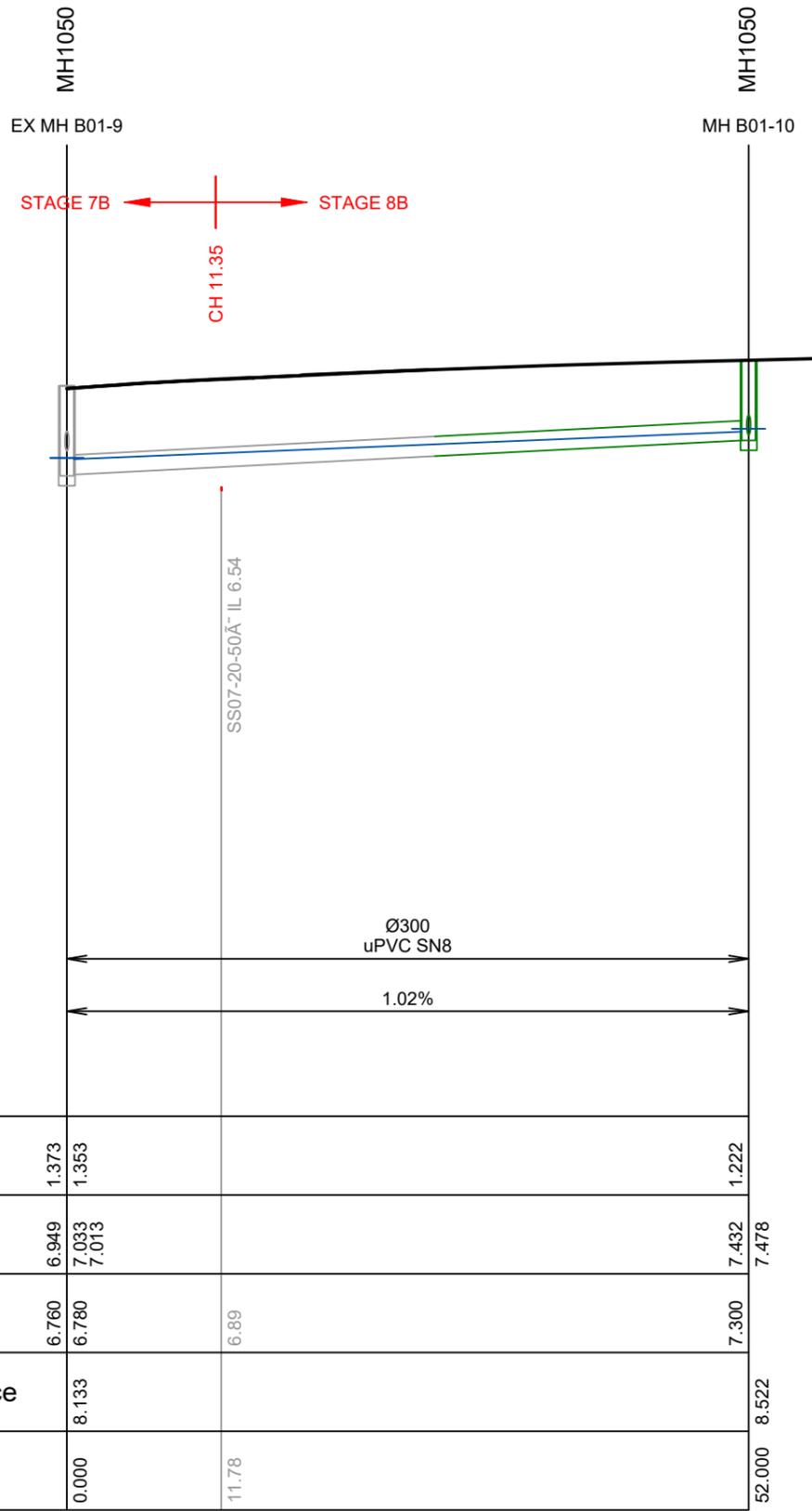
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DWG NUMBER	DD653	REVISION	B				

SCALE 1:500

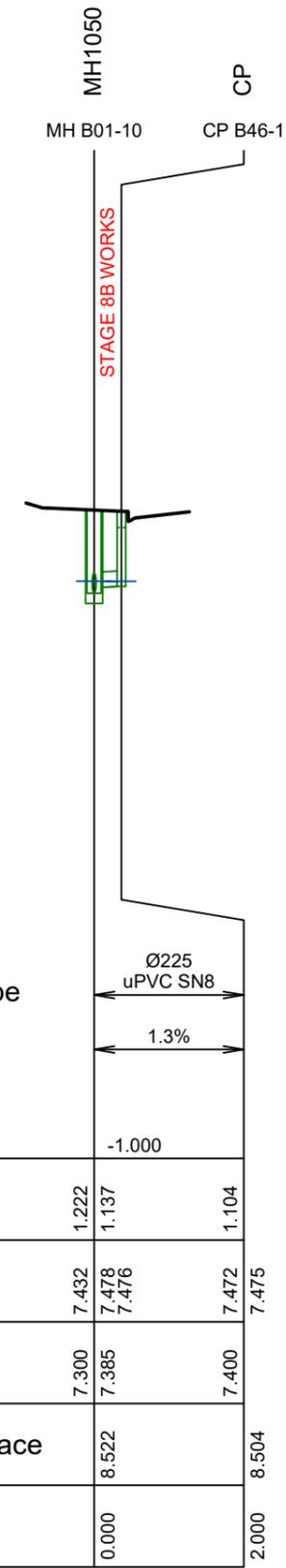
KEY:
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BACKFILL 

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



LINE B01



LINE B46

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 25

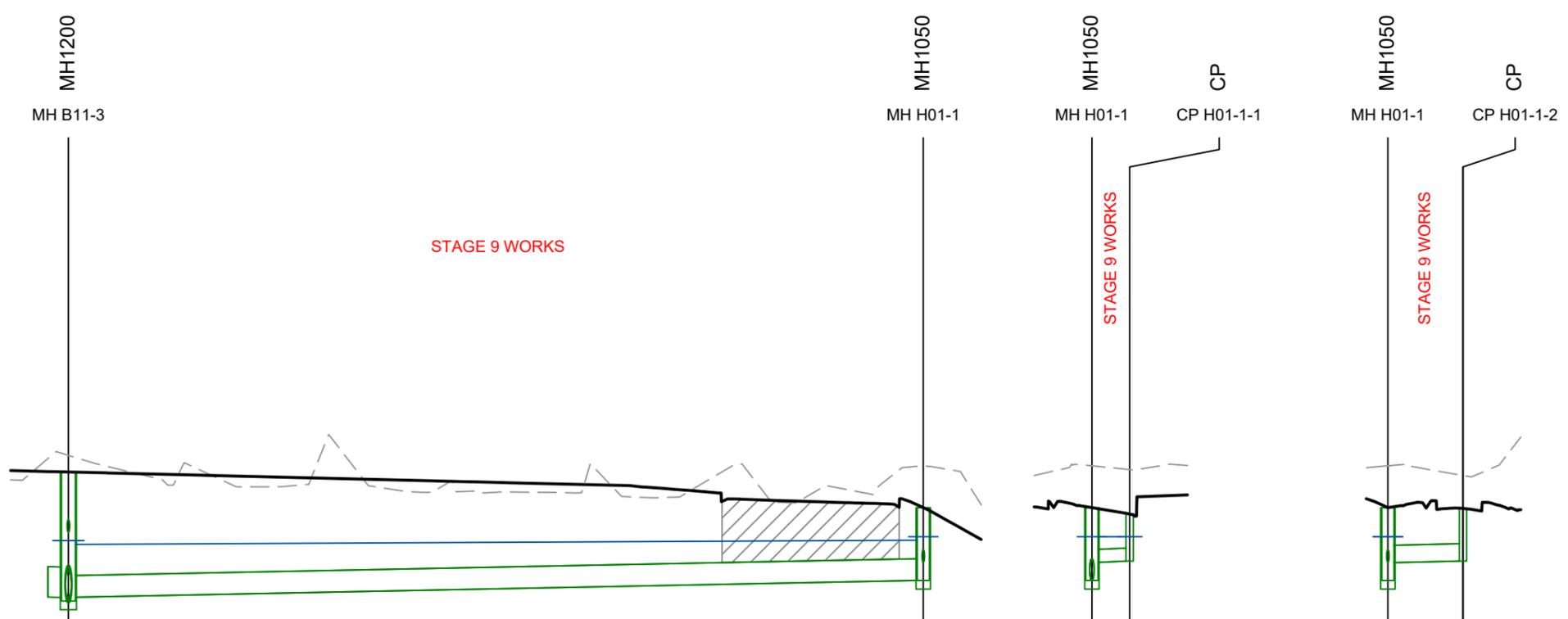
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CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD654	REVISION	B				


PHILIP COOK
CPEng#203738

KEY:
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EXSW = EXISTING STORMWATER
SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL 

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



STAGE 9 WORKS

STAGE 9 WORKS

STAGE 9 WORKS

Pipe Size/Type	Ø375 uPVC SN8	
Grade (%)	0.4%	
Datum	-3.000	
Depth To Invert	2.229 2.164	1.257
Invert Levels	5.000 5.065	5.356
Finished Surface	7.229	6.613
Chainage	0.000	73.862

Pipe Size/Type	Ø225 uPVC SN8	
Grade (%)	1%	
Datum	-3.000	
Depth To Invert	1.257 0.947	0.812
Invert Levels	5.356 5.666	5.690
Finished Surface	6.613	6.502
Chainage	0.000	3.256

Pipe Size/Type	Ø300 uPVC SN8	
Grade (%)	0.5%	
Datum	-3.000	
Depth To Invert	1.257 0.951	0.910
Invert Levels	5.356 5.662	5.690
Finished Surface	6.613	6.600
Chainage	73.862	80.348

LINE H01

LINE H01-1

LINE H01-2

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100


PHILIP COOK
CPEng#203738



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 26

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD655	REVISION	B				

SCALE 1:500

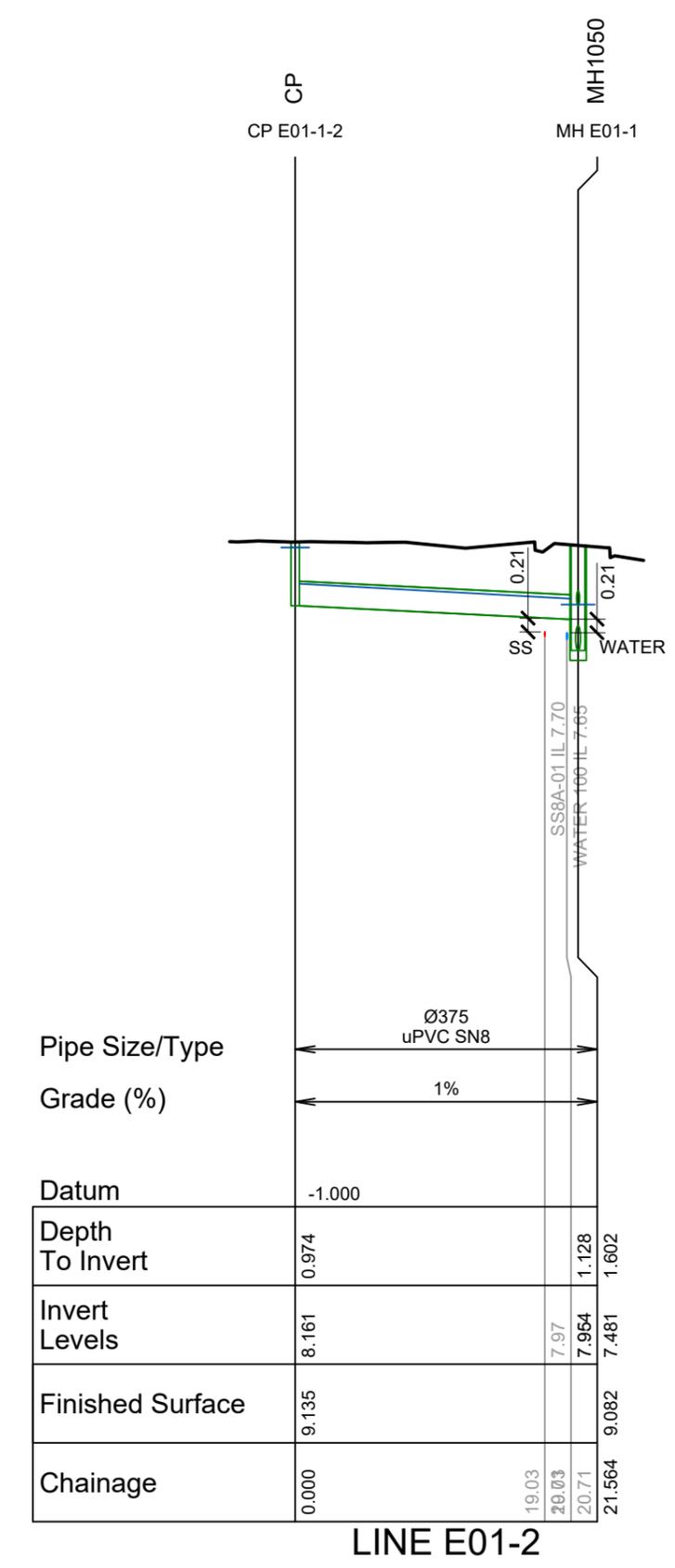
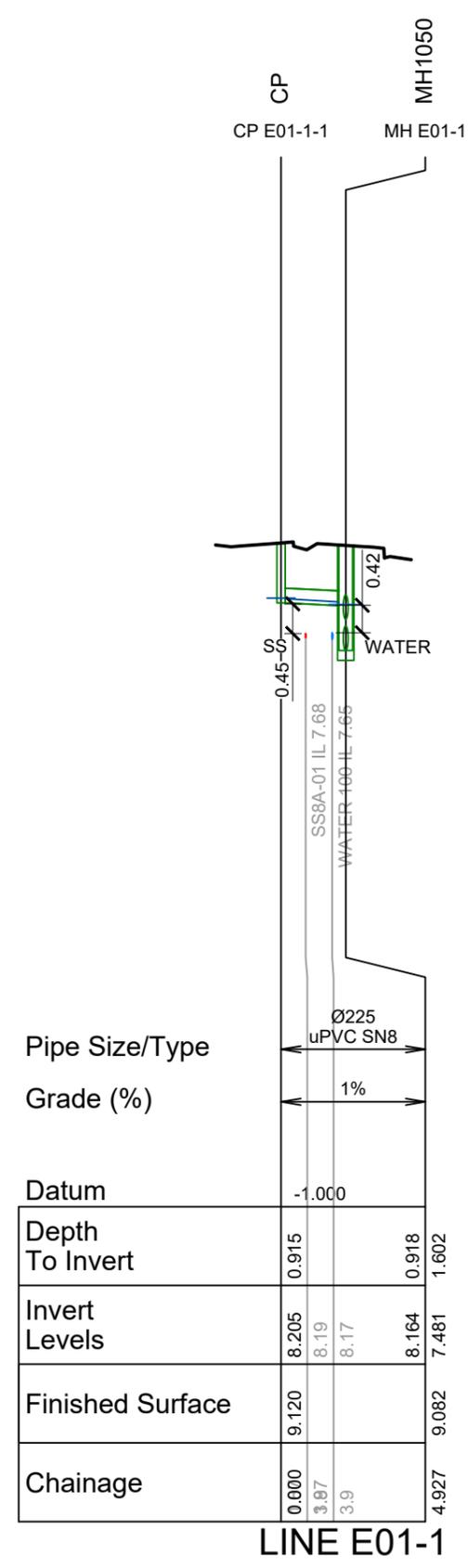
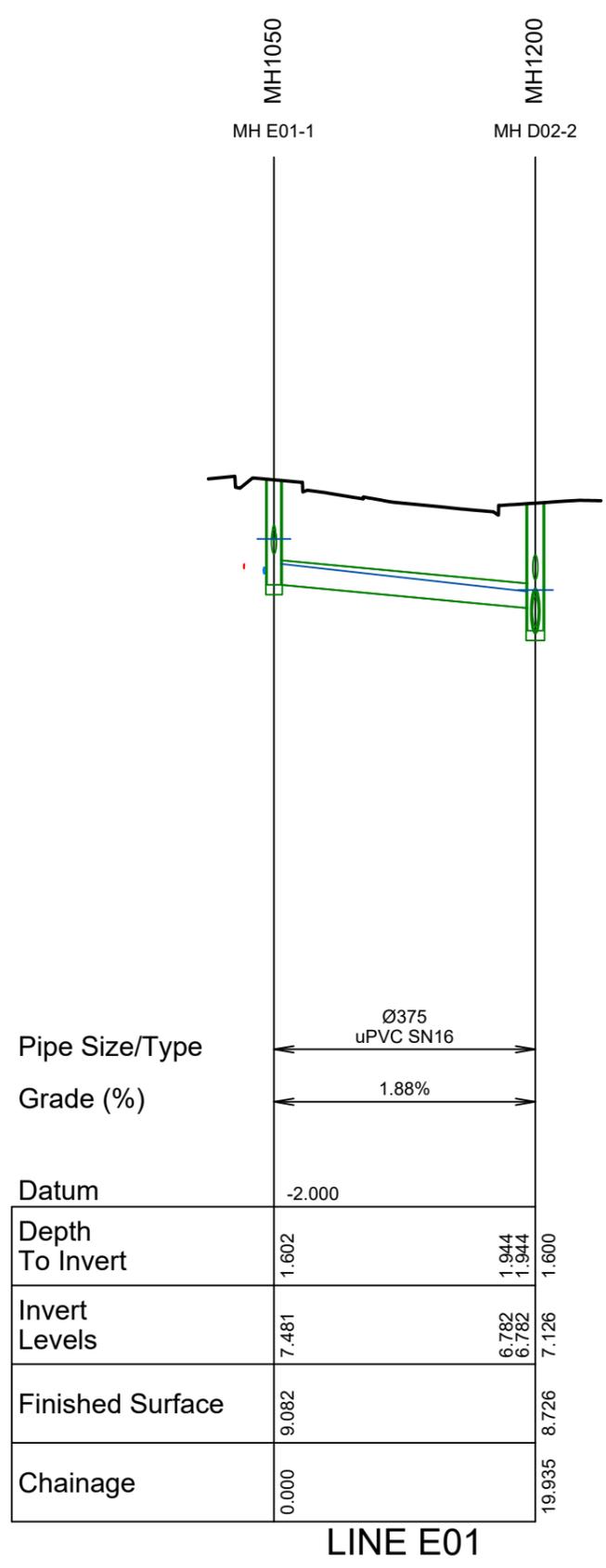
KEY:
EXSS = EXISTING SANITARY SEWER
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SS = PROPOSED SANITARY SEWER
WATER = POTABLE WATER

BACKFILL 

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100




PHILIP COOK
CPEng#203738



C				
B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC
REV.	REVISION DETAILS		DRAWN	APP.

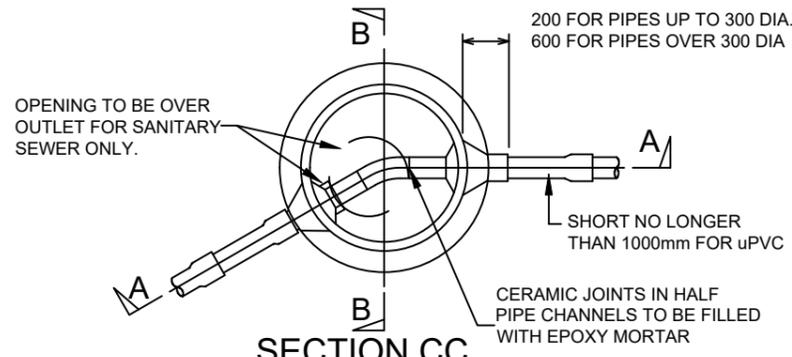
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
STORMWATER LONGSECTIONS
SHEET 27

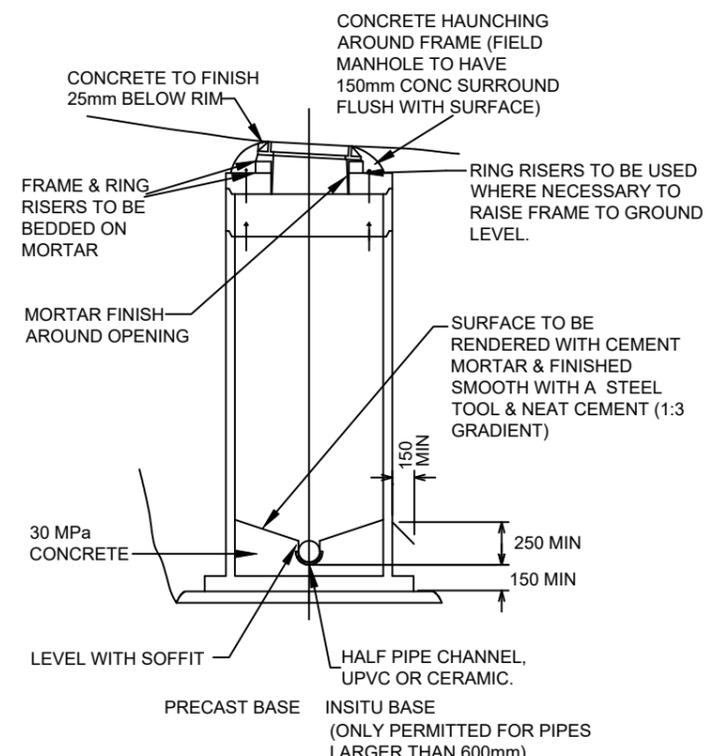
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DWG NUMBER	DD656			REVISION	B		

SCALE 1:500

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

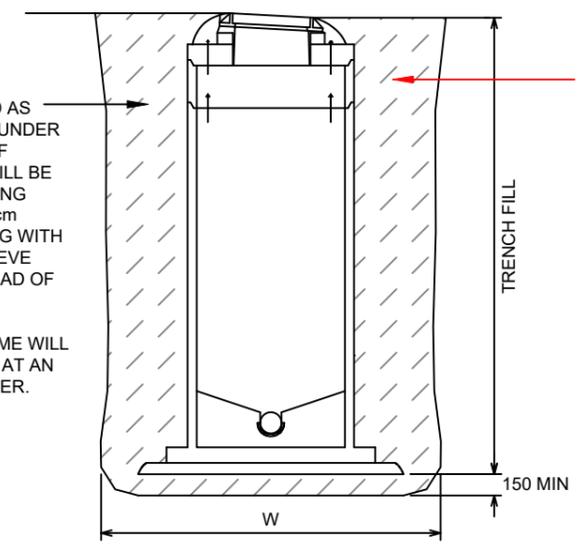


- NOTES:
1. THIS DETAIL IS APPLICABLE FOR PIPE DIAMETERS UP TO 600mm & FOR MANHOLE DEPTHS UP TO 5.0m.
 2. ALL STEEL FITTINGS TO BE HOT DIP GALVANISED ZINC COATINGS TO BE NOT LESS THAN 700g/m
 3. 150mm THICK REINFORCED CONCRETE LIDS WITH HEAVY DUTY DUCTILE IRON FRAMES & COVERS TO BE USED IN DRIVEWAYS, CARRIAGEWAYS & BERMS. 100mm THICK CONCRETE LIDS WITH LIGHT DUTY CAST IRON FRAMES & COVERS MAY BE USED ELSEWHERE.
 4. PRECAST MANHOLE BASES SHALL BE USED IN ALL INSTANCES WITH MINIMUM SIZED HOLES CUT FOR PIPE ENTRY.
 5. NO ADDITIONAL THIN PLASTERING OF BENCHING OR INVERTS IS PERMITTED.
 6. ALL MANHOLE THROATS ARE TO BE PAINTED GREEN FOR STORMWATER, RED FOR SEWER. PAINTING ON MANHOLE COVERS IS OPTIONAL. IF COVERS ARE PAINTED THEY SHALL BE GREEN FOR STORMWATER, RED FOR SEWER WITH 50mm WIDE WHITE STRIP PAINTED THROUGH THE CENTRE OF THE COVER.
 7. ALL CONCRETE TO BE 20 MPa AT 28 DAYS.
 8. STORMWATER MANHOLES DO NOT REQUIRE HALF PIPE CHANNELS, OR SHORT PIPE SECTIONS BEYOND THE ENTRY OR EXITS.
 9. STEPPED RUNGS NOT TO BE PROVIDED FOR SEWER MANHOLES.
 10. BASE TO BE COMPACTED TO RESILIENT MODULUS OF 40 MPa FOR ALL PIPES, MANHOLES, SUMPS, PITS, ETC.



SECTION BB

GAP20 TO BE USED AS BACKFILL EXCEPT UNDER CARRIAGEWAYS. IF REQUIRED, LIME WILL BE MIXED BY SPREADING AGGREGATE IN 30cm LAYERS AND MIXING WITH BACKHOE TO ACHIEVE CONSISTENT SPREAD OF LIME PRIOR TO BACKFILLING. ALTERNATIVELY LIME WILL BE MIXED OFFSITE AT AN APPROVED SUPPLIER.



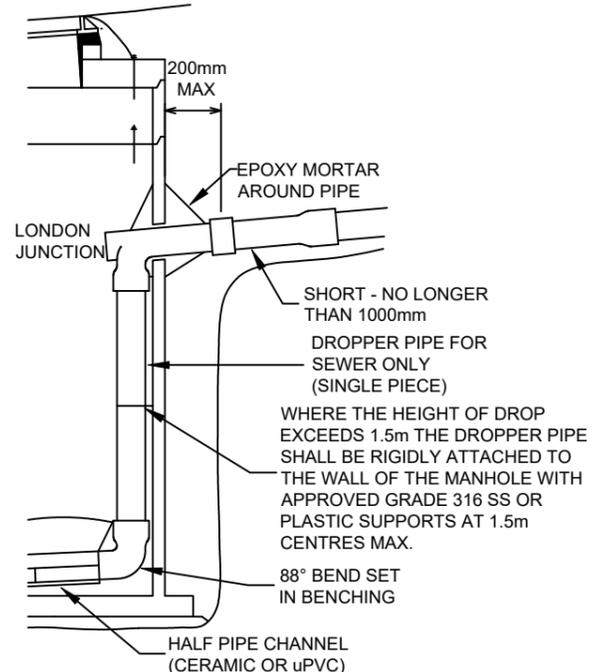
MANHOLE BEDDING DETAIL FOR STANDARD MANHOLES

REFER TO NZS 4404:2010 CM002
NOT TO SCALE

ACID SULPHATE NOTE:
CALCIUM CARBONATE (AGRICULTURAL LIME) TO BE MIXED IN WITH THE BEDDING AND BACKFILL AROUND WHERE ALL STANDARD CONCRETE PIPES AND MANHOLES ARE TO BE INSTALLED. LIMING RATE 23KG/CaCO3/TONNE OF SOIL. AS A PERCENTAGE ~2.5% BY WEIGHT LIME MIXED IN WITH THE SOIL. ALL METAL FITTINGS AND CONNECTIONS TO BE PAINTED OR WRAPPED TO BE PROTECTED FROM THE SOIL.

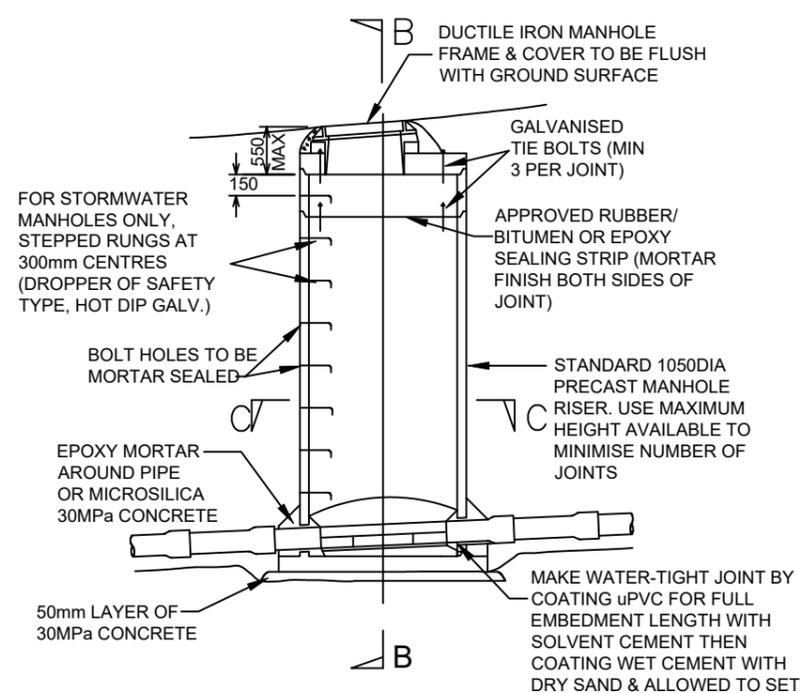
W	TYPE OF MANHOLE
D + 450	CONCRETE

VARIATION IN W REQUIRE ADDITIONAL DESIGN COMPENSATION.
D = EXTERNAL Ø OF MANHOLE



SECTION A-A INTERNAL DROP

- NOTE:
1. THIS DETAIL IS APPLICABLE FOR PIPE DIAMETERS UP TO 250mm & FOR MANHOLE DEPTHS UP TO 5.0m & FOR MANHOLE DIAMETERS > 1200mm
 2. FOR MANHOLE DIAMETERS < 1200mm AN EXTERNAL DROP MUST BE USED (SEE NZS 4404, SHEET CM-004)



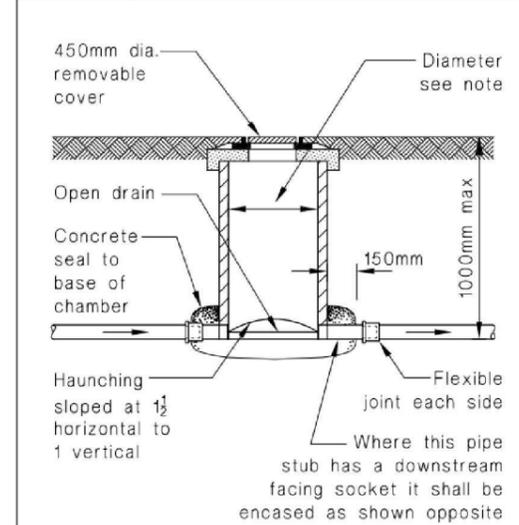
SECTION AA

STANDARD PRECAST MANHOLE (SEWER & STORMWATER)

REFER TO NZS 4404:2010
NOT TO SCALE

NZ BUILDING CODE E1

Figure 11: Typical Inspection Chamber
Paragraphs 3.5.3, 3.7.1 and 3.7.4



SECTION

NOTE:
Inspection chamber diameter to be:
-450 mm for drains 100 mm dia or less.
-600 mm for drains greater than 100 mm dia.

IMPORTANT NOTE: PRODUCER STATEMENTS P54 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
WDC IQP#014

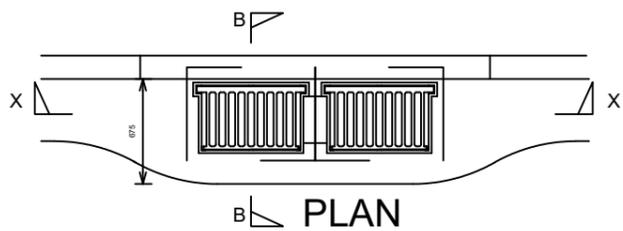
600Ø MANHOLE WITH TRAFFICABLE LID

 www.coco.co.nz Whangarei Auckland Wellington Christchurch	C		PROJECT DETAILS	TITLE	DATE CREATED	DRAWN	DESIGNED	APPROVED
	B	PLAN SET UPDATED	17-03-23 KH PC	WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	07/12/2022	K HANSARD	R BROOKES	P COOK
	A	1st ISSUE	07-12-22 KH PC	TYPICAL MANHOLE DETAILS	CCL REF NO	SCALE	STATUS	FOR APPROVAL
	REV.	REVISION DETAILS	DRAWN APP.		14333-009	NTS @ A3		
					DWG NUMBER	REVISION		
					DD680			B

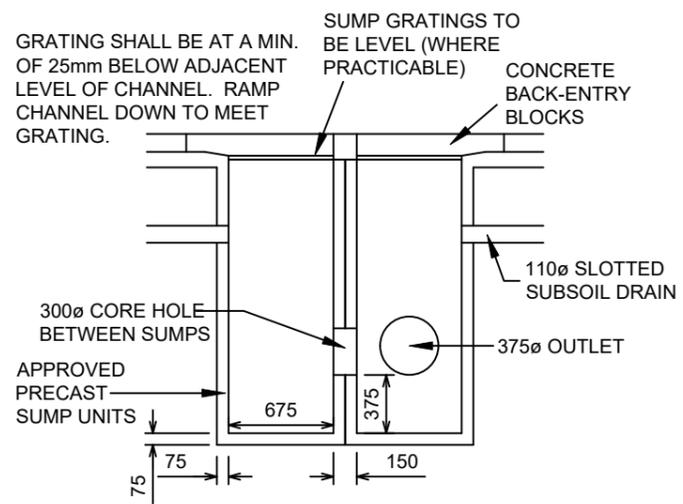
IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


 PHILIP COOK
 WDC IQP#014

NOTE:
 FOR CONSTRUCTION NOTES SEE SHEET DD002

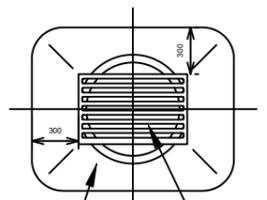


PLAN

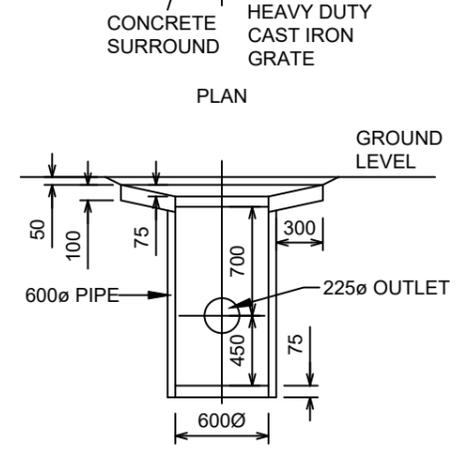


**SECTION X-X
 DOUBLE SUMP**

SHEET 34 WDC EES 2010 - NOT TO SCALE



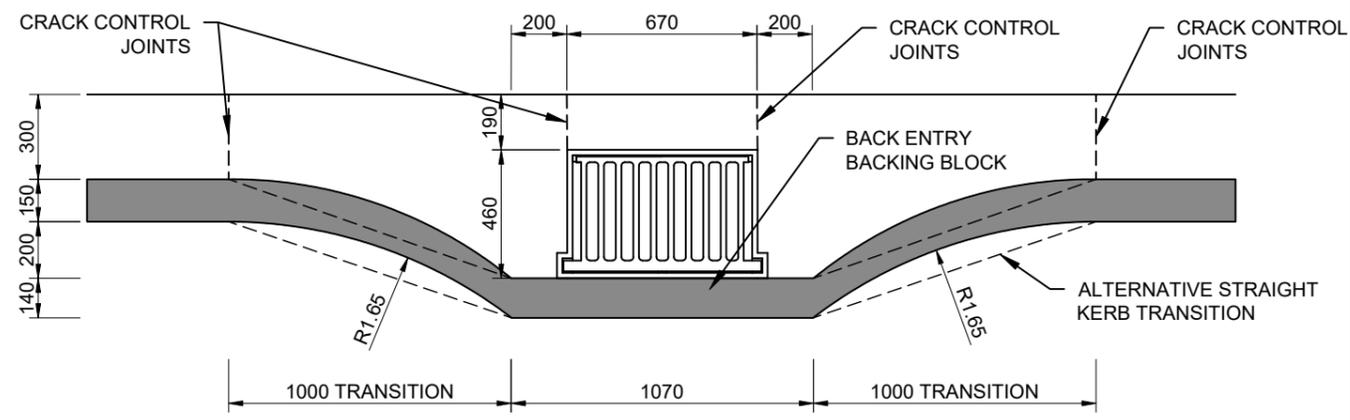
PLAN



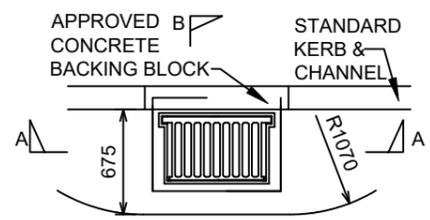
SECTION

FIELD SUMP DETAIL

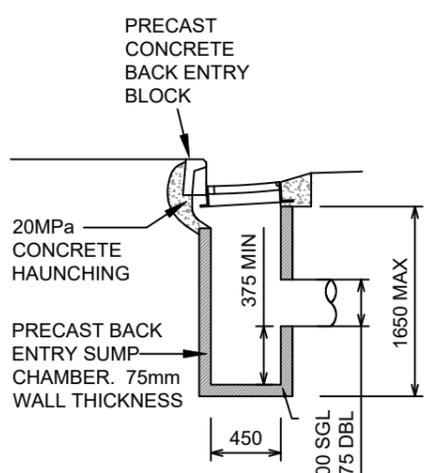
SHEET 34 WDC EES 2010 - NOT TO SCALE



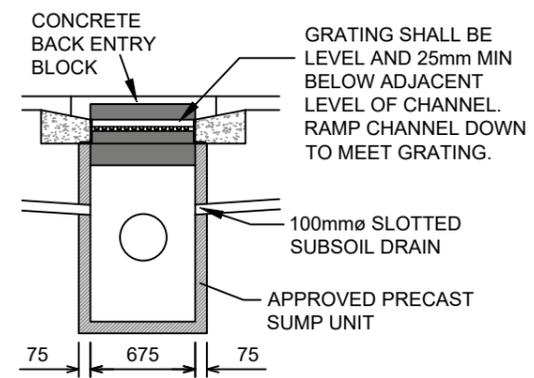
RECESSED PLAN



PLAN

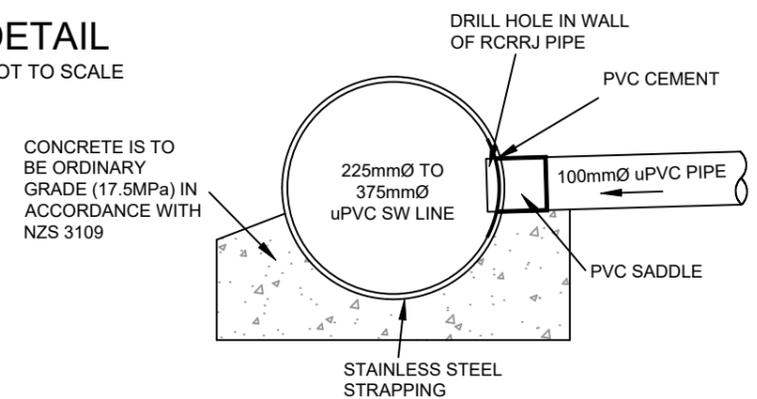


SECTION B-B

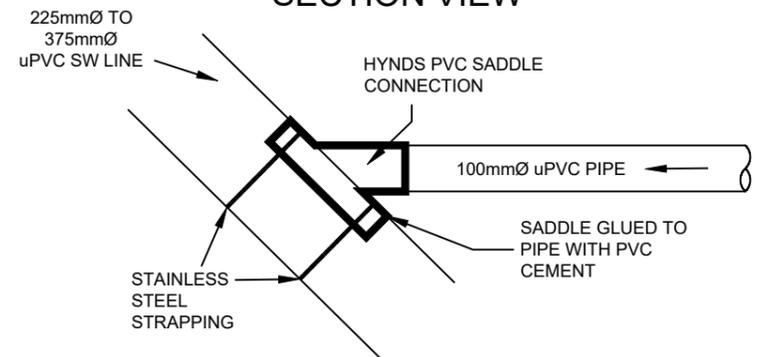


**SECTION A-A
 SINGLE SUMP**

SHEET 34 WDC EES 2010 - NOT TO SCALE



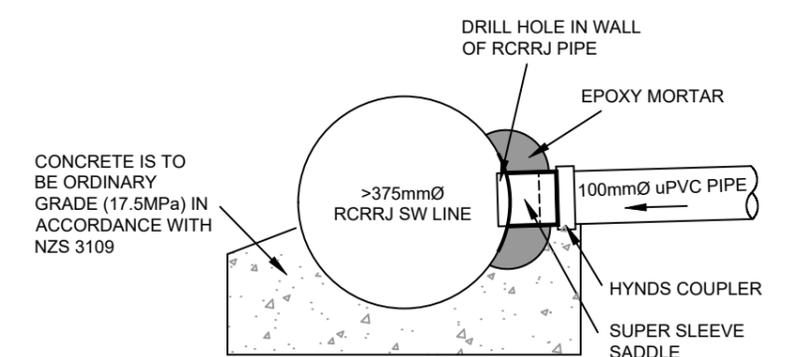
SECTION VIEW



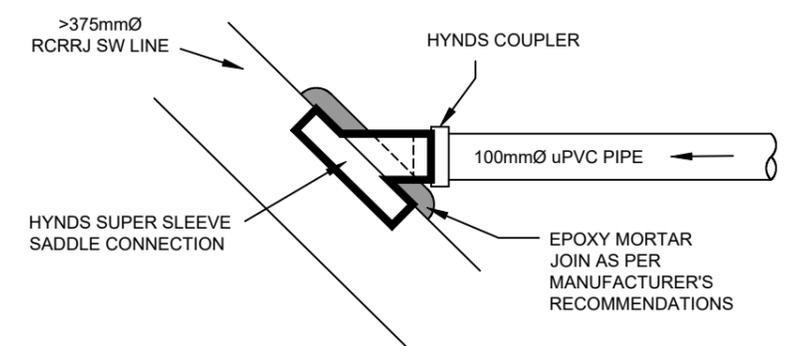
PLAN VIEW

SADDLE CONNECTION DETAIL FOR PVC PIPES

NOT TO SCALE



SECTION VIEW



PLAN VIEW

SADDLE CONNECTION DETAIL FOR CONCRETE PIPES

NOT TO SCALE

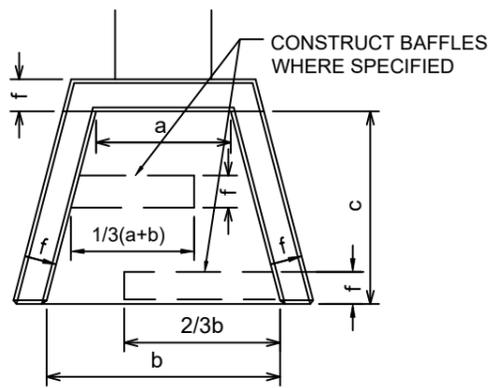


C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

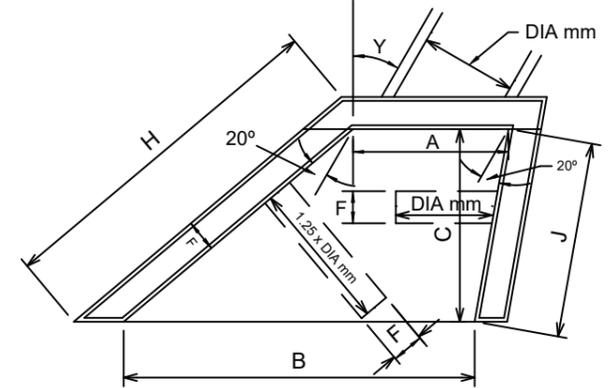
PROJECT DETAILS	
WFH PROPERTIES LIMITED	
THE LANDING - STAGES 8A, 8B & 9	
ONE TREE POINT	
RUAKAKA	

TITLE	
TYPICAL SUMP DETAILS	
& SADDLE CONNECTION DETAILS	

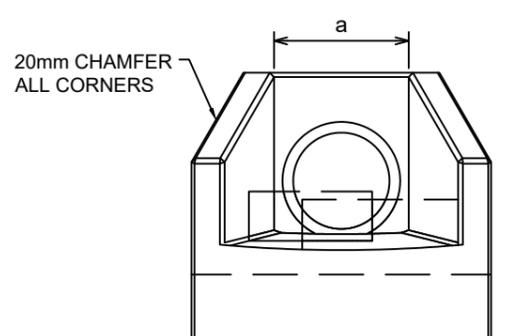
DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	NTS @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD681	REVISION	B				



PLAN
SHEET 35 WDC EES 2010 - NOT TO SCALE

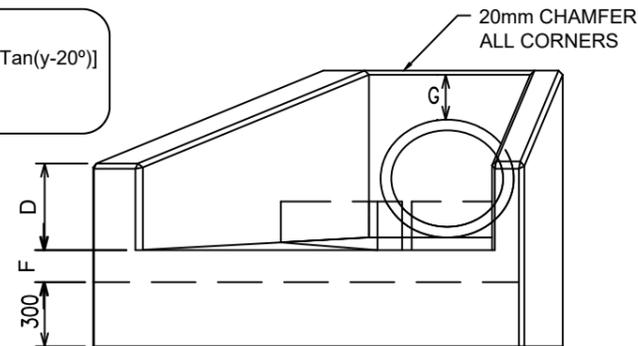


PLAN
SHEET 35 WDC EES 2010 - NOT TO SCALE

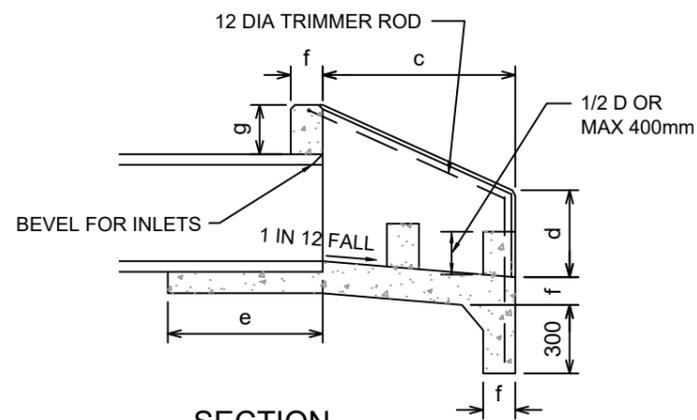


END ELEVATION
SHEET 35 WDC EES 2010 - NOT TO SCALE

- A. $\text{Sec } y \times (a)$
- B. $C \tan (y+20^\circ) + [A-C \tan (y-20^\circ)]$
- H. $C \times \text{Sec } (y + 20^\circ)$
- J. $C \times \text{Sec } (y - 20^\circ)$



END ELEVATION
SHEET 35 WDC EES 2010 - NOT TO SCALE



SECTION
SHEET 35 WDC EES 2010 - NOT TO SCALE

PRINCIPAL DIMENSIONS (mm)							
DIA OF PIPE	a	b	c	d	e	f	g
150	300	450	600	200	325	100	150
230	380	600	700	250	425	100	150
300	450	750	750	300	525	100	150
375	550	900	850	350	625	100	150
450	630	1100	900	400	725	150	230
525	700	1200	1000	450	825	150	230
600	800	1400	1100	550	900	150	230
750	1000	1700	1200	600	1050	150	300
900	1170	2000	1450	650	1225	150	300
1050	1380	2300	1700	750	1375	150	300
1200	1520	2600	2100	750	1550	150	450
1350	1680	2800	2400	750	1725	150	450

- NOTES:**
- REINFORCE FLOORS & WALLS WITH:

150 - 375	665 MESH
450 - 600	633 MESH OR D10 RODS AT 250 CRS
675 - 900	D12 RODS AT 250 CRS
1050 - 1350	D12 RODS AT 150 CRS
 - ALL REINFORCEMENT SHALL BE PLACED CENTRALLY IN WALLS AND FLOOR, AND SHALL BE CONTINUOUS BETWEEN WALLS AND FLOOR.
 - LAPS IN STRUCTURAL GRADE BARS TO BE 300 MIN.

- THERE SHALL BE A LEAST 2 BARS - WHETHER MESH OR M.S. OVER THE TOP OF THE PIPE.
- CONCRETE IS TO BE ORDINARY GRADE (17.5MPa) IN ACCORDANCE WITH NZS 3109.
- BAFFLES ARE TO BE CONSTRUCTED AS SHOWN WHEN OUTLET VELOCITIES AND SOIL CONDITIONS DICTATE, IN EXTREME CASES SPECIFIC DESIGN MAY BE REQUIRED BY THE COUNCIL.
- INLET STRUCTURES SHALL HAVE REVERSE APRON FALL AND NO BAFFLES.

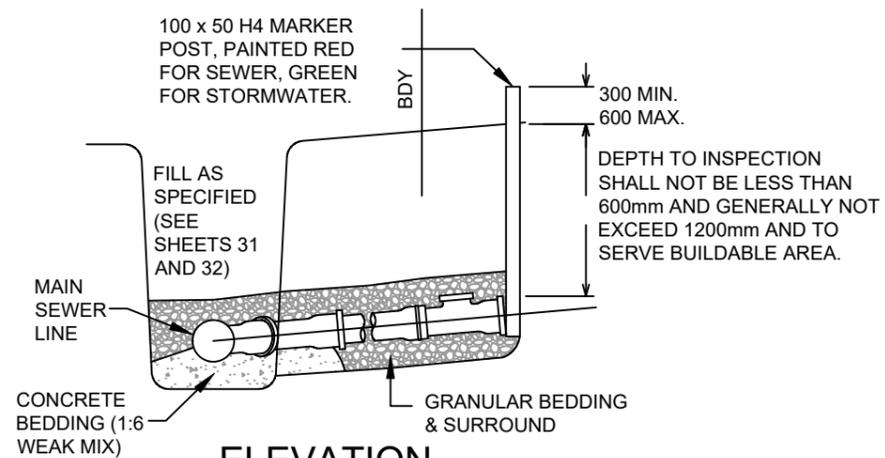

PHILIP COOK
WDC IQP#014

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

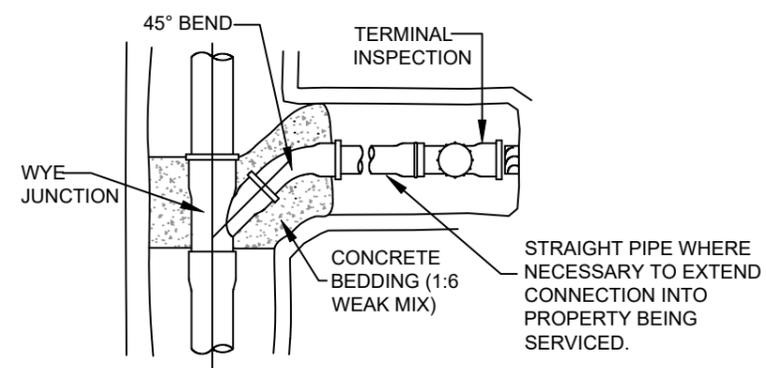
INLET AND OUTFALL STRUCTURES

 Whangarei Auckland Wellington Christchurch www.coco.co.nz	C		PROJECT DETAILS		TITLE	DATE CREATED	DRAWN	DESIGNED	APPROVED
	B	PLAN SET UPDATED	17-03-23 KH PC	WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	INLET AND OUTFALL STRUCTURES	07/12/2022	K HANSARD	R BROOKES	P COOK
	A	1st ISSUE	07-12-22 KH PC			CCL REF NO	SCALE	STATUS	
	REV.	REVISION DETAILS	DRAWN APP.			14333-009	NTS @ A3	FOR APPROVAL	
						DWG NUMBER	REVISION		
						DD682	B		

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002



ELEVATION

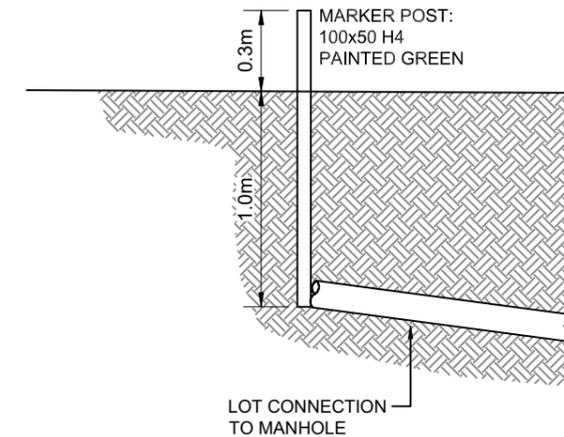


MARKING OF SS & SW CONNS

NOTE THAT RED PAINT IS NO LONGER TO BE USED FOR SW SERVICES. IT IS FOR SEWER SERVICES ONLY.

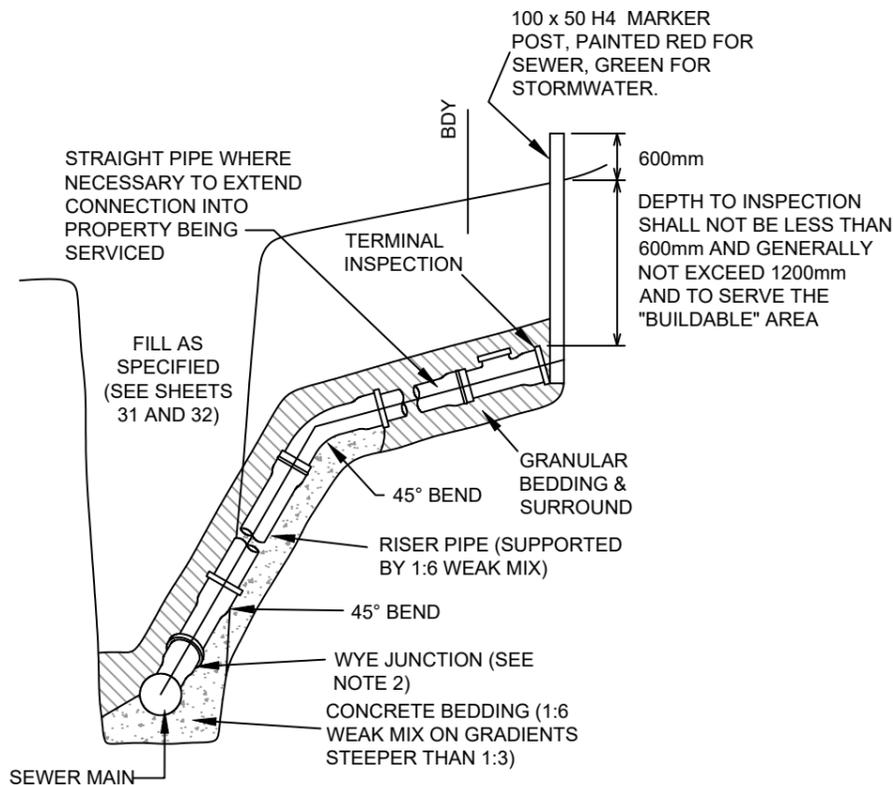
CONNECTIONS SHALL BE SEALED WITH REMOVABLE CAPS UNTIL REQUIRED. THE CAPS ARE TO BE PAINTED:
RED FOR SEWER WITH 'SS' PAINTED/FIXED ONTO THE END CAP.
GREEN FOR STORMWATER WITH 'SW' PAINTED/FIXED ONTO THE END CAP.

POSITIONS ARE ALSO TO BE MARKED WITH A WOODEN STAKE (MIN 100x50) EXTENDING FROM THE INVERT OF THE CONNECTION TO 600mm ABOVE GROUND LEVEL. STAKES ARE TO BE PAINTED:
RED FOR SEWER WITH 'SS' PAINTED/FIXED ONTO THE STAKE
GREEN FOR STORMWATER WITH 'SW' PAINTED/FIXED ONTO THE END CAP.



TYPICAL STORMWATER CONNECTION MARKER DETAIL
NTS

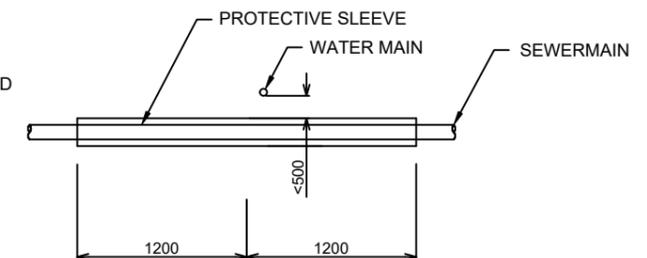
- NOTES:
1. THE TERMINAL INSPECTION SHALL BE LOCATED NOT LESS THAN 300mm INSIDE THE PROPERTY BEING SERVICED AND BE FREE OF OBSTRUCTIONS.
 2. FOR STORMWATER CONNECTIONS, JUNCTIONS TO BE (IN ORDER OF PREFERENCE):
 a. PREFABRICATED STANDARD WYE JUNCTIONS
 b. PREFABRICATED FACTORY SPECIAL CONNECTION
 c. FIELD FABRICATED EPOXY MORTARED SADDLE FLANGE CONNECTION WITH APPROPRIATE INSERT ADAPTOR.
 3. TERMINAL BLANK END REQUIRED FOR STORMWATER CONNECTIONS.
 4. PIPES AND FITTINGS ARE TO BE SEWER GRADE uPVC, VITRIFIED CLAY, CONCRETE OR CERAMIC AND TO RELEVANT NZ STANDARD.
 5. PIPELINES THAT ARE LIKELY TO CARRY COMMERCIAL OR INDUSTRIAL WASTE ARE TO SATISFY THE MANUFACTURER'S REQUIREMENTS.
 6. SPECIFIC DESIGN MAY BE REQUIRED IN POTENTIALLY UNSTABLE AREAS.
 7. JOINT FLEXIBILITY IS TO BE MAINTAINED WHERE PIPELINES ARE IN CONTACT WITH CONCRETE. PIPES SHALL BE SEPARATED FROM CONCRETE USING DPC.
 8. AS-BUILT PLANS ARE REQUIRED FOR ALL CONNECTIONS.



RAMPED RISER CONNECTION

SHEET 36 WDC EES 2010 - NOT TO SCALE
(REQUIRES SPECIFIC APPROVAL)

NOTE: WHEN A WATERMAIN VERTICAL CLEARANCE WITH A SEWER LINE IS LESS THAN 0.5m THE SEWER LINE IS TO BE PLACED INSIDE A SLEEVE 1200MM EITHER SIDE OF WATERMAIN TO REDUCE RISK OF CROSS CONTAMINATION



TYPICAL SEWERMAIN SLEEVE DETAIL
NOT TO SCALE

PHILIP COOK
WDC IQP#014

STORMWATER AND SEWER CONNECTIONS
FOR ALL ENVIRONMENTS

IMPORTANT NOTE: PRODUCER STATEMENTS
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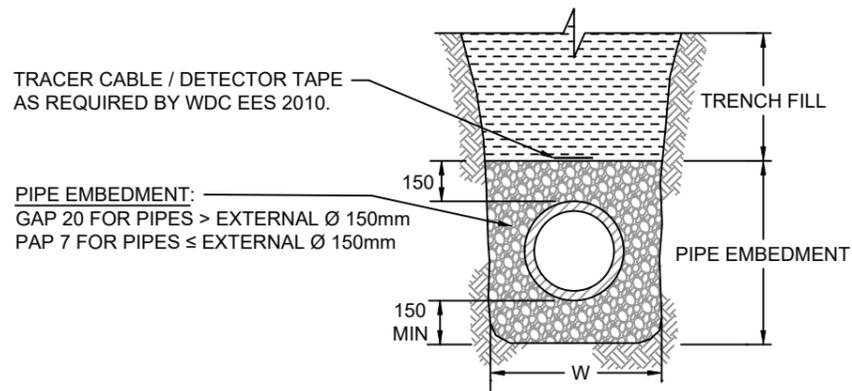
C	PROJECT DETAILS	WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	TITLE	STORMWATER & SEWER CONNECTIONS	DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
	B	PLAN SET UPDATED	17-03-23		CCL REF NO	14333-009	SCALE	NTS @ A3	STATUS	FOR APPROVAL		
	A	1st ISSUE	07-12-22		DWG NUMBER	DD683	REVISION	B				
	REV.	REVISION DETAILS	DRAWN APP.									

NOTE:
FOR CONSTRUCTION NOTES SEE SHEET DD002

ACID SULPHATE NOTE:

CALCIUM CARBONATE (AGRICULTURAL LIME) TO BE MIXED IN WITH THE BEDDING AND BACKFILL AROUND WHERE ALL STANDARD CONCRETE PIPES AND MANHOLES ARE TO BE INSTALLED. LIMING RATE 23KG/CaCO3/TONNE OF SOIL. AS A PERCENTAGE ~2.5% BY WEIGHT LIME MIXED IN WITH THE SOIL. ALL METAL FITTINGS AND CONNECTIONS TO BE PAINTED OR WRAPPED TO BE PROTECTED FROM THE SOIL.

- GENERAL:
- WEAK MIX CONCRETE:
1 PART CEMENT TO 6 PARTS AGGREGATE.
CEMENT STABILISED BEDDING AND BACK FILL:
1 PART CEMENT TO 20 PARTS AGGREGATE.
 - ALLOW 48 HOURS CURING PRIOR TO BACK FILLING ANY CONCRETE OR STABILISED MATERIAL.

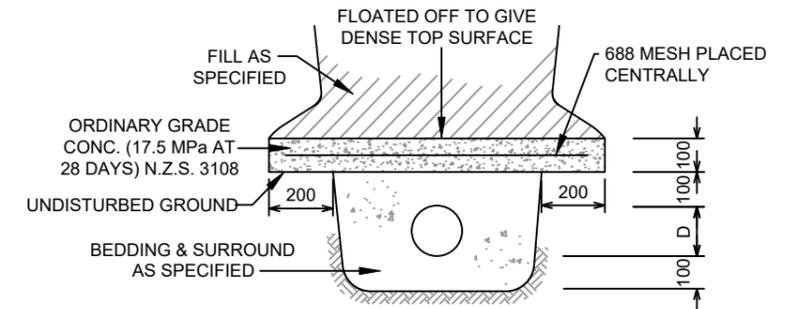


**PIPE BEDDING DETAIL FOR
STORMWATER (CONCRETE OR uPVC),
GRAVITY SEWER (uPVC), WATERMAIN
(PE80) & LOW PRESSURE SEWER (PE100)**

(NZS 4404-2010, CM002)
FOR FLEXIBLE & RIGID PIPES (SEE NOTE 4)

W	TYPE OF PIPE
D + 450	CONCRETE
D + 450	uPVC, PE & PP

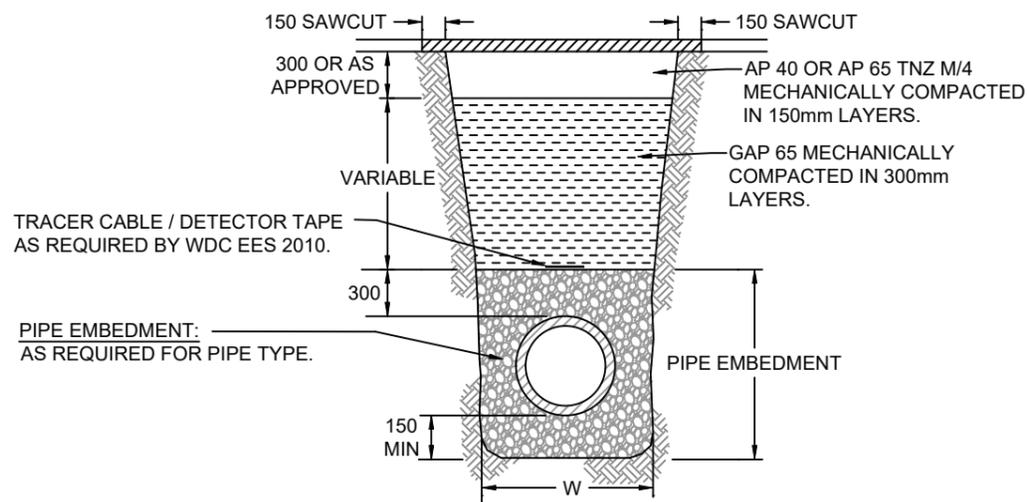
VARIATION IN W REQUIRE ADDITIONAL DESIGN COMPENSATION.
D = EXTERNAL Ø OF PIPE



**REINFORCED CONCRETE SLAB
PROTECTION**

(WHERE ADDITIONAL LOADING OR OTHER REQUIREMENTS NECESSITATE)
SHEET 32 WDC EES 2010 - NOT TO SCALE

W	TYPE OF PIPE
D + 600	STEEL, DI
D + 450	CONCRETE
D + 450	VITRIFIED CLAY
D + 450	uPVC, PE & PP



**PIPE BEDDING DETAIL WITH ADDITIONAL
BACKFILL REQUIREMENTS UNDER
CARRIAGEWAYS**

(ALL TYPES OF PIPE)

NOTES

- SEE CONSTRUCTION NOTES DD002.
- ALL DIMENSIONS IN MILLIMETRES.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH NZS 4404-2010 SHEET CM-001 & CM-002.
- PIPE CLASSIFICATION:
 - RIGID PIPES: VC, RC, STEEL, AND DI.
 - FLEXIBLE PIPES: PVC, GRP, AND PE.
- PLACEMENT OF EMBEDMENT, TRENCHFILL & COMPACTION TO MEET THE REQUIREMENTS OF DRAWINGS AND SPECIFICATIONS.
- EXCAVATE OR COMPACT TRENCH FLOOR TO PROVIDE A FLAT FIRM BASE TO SUPPORT BEDDING MATERIAL AND MINIMISE PIPELINE SETTLEMENT. WHEN EXCAVATED, REPLACE WITH GRANULAR MATERIAL AS SPECIFIED & SUPPORT AS REQUIRED.
- ENSURE BEDDING IS DEEP ENOUGH THAT PIPE JOINT PROJECTIONS (SOCKETS, FLANGES) DO NOT TOUCH TRENCH FLOOR - SEE NZS 4404-2010 SHEET CM-001.
- IN SOME AREAS LOCAL PRACTICE MAY ALLOW USE OF SELECTED EXCAVATED MATERIAL AS PIPE EMBEDMENT.
- IN UNSUITABLE GROUND CONDITIONS SPECIFIC DESIGN IS REQUIRED REFER TO WSA 03 & WSA 04 (WATER SERVICES ASSOCIATION OF AUSTRALIA) DRAWINGS FOR GUIDANCE.
- CONCRETE PIPES SHOULD BE BASED ON FIGURES 11 TO 13 IN AS/NZS 3725.
- GAP 65 MAY BE USED FOR PIPE EMBEDMENT OF CONCRETE STORMWATER LINES. 150mm BEDDING MUST USE GAP 20 AS SPECIFIED IN DETAIL.

PHILIP COOK
WDC IQP#014

**IMPORTANT NOTE: PRODUCER STATEMENTS
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INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION**

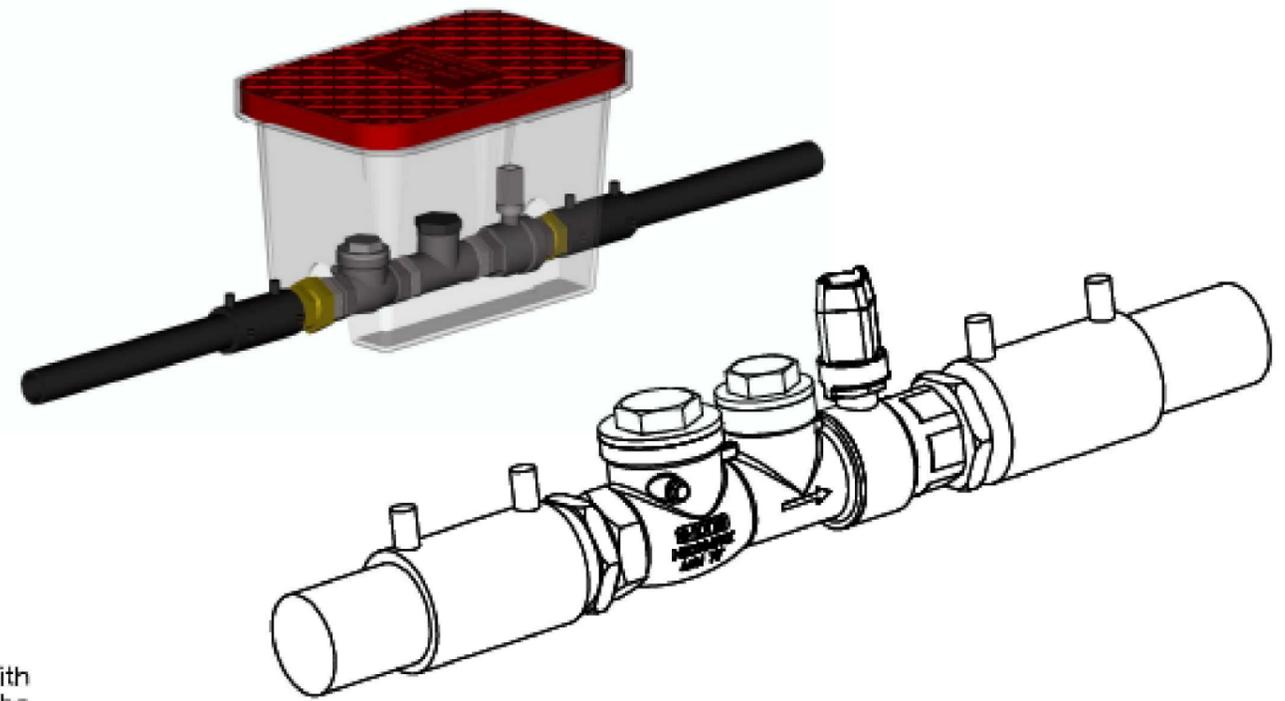
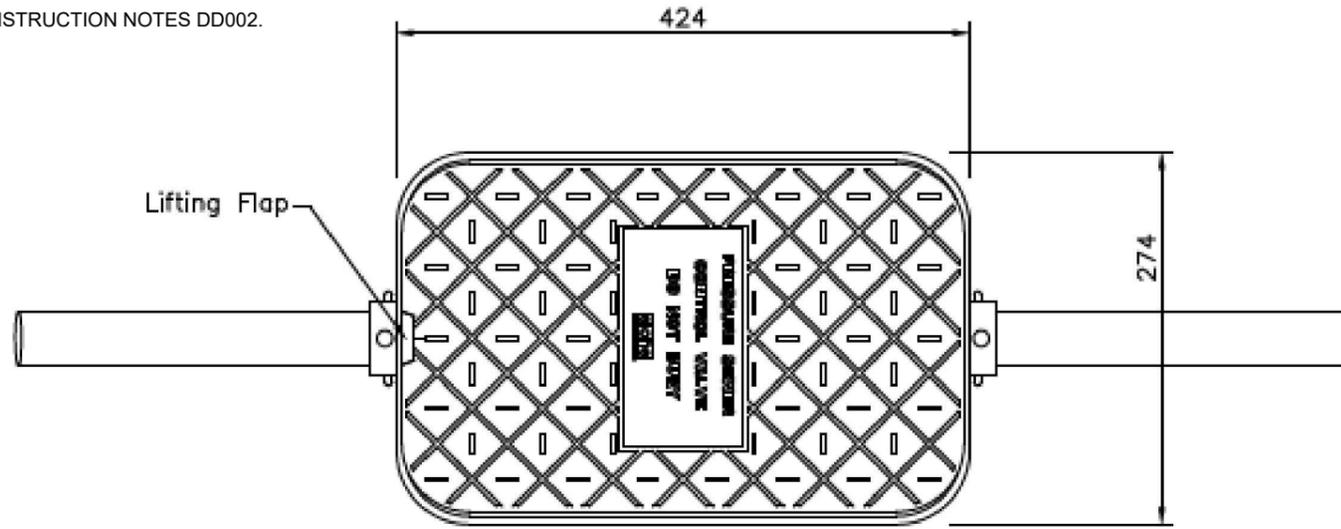
REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC

PROJECT DETAILS	TITLE
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	TRENCH & HEADWALL DETAILS

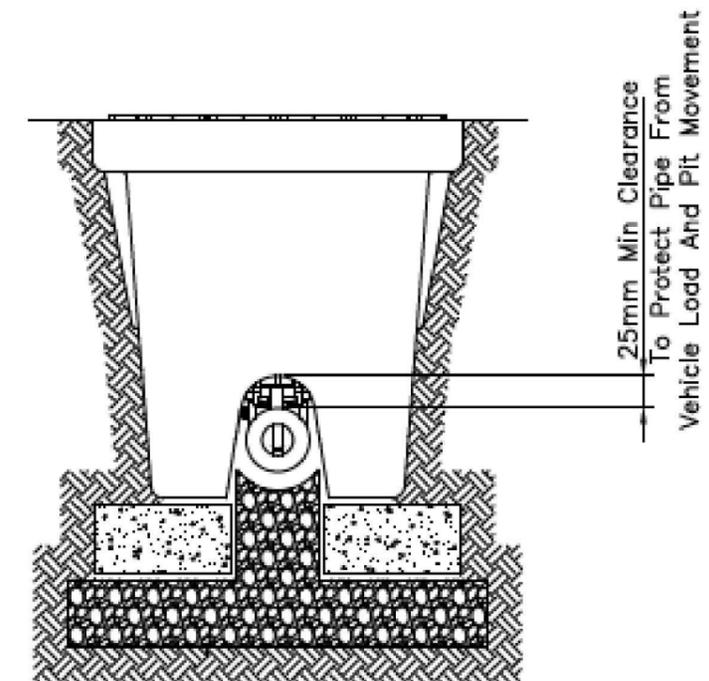
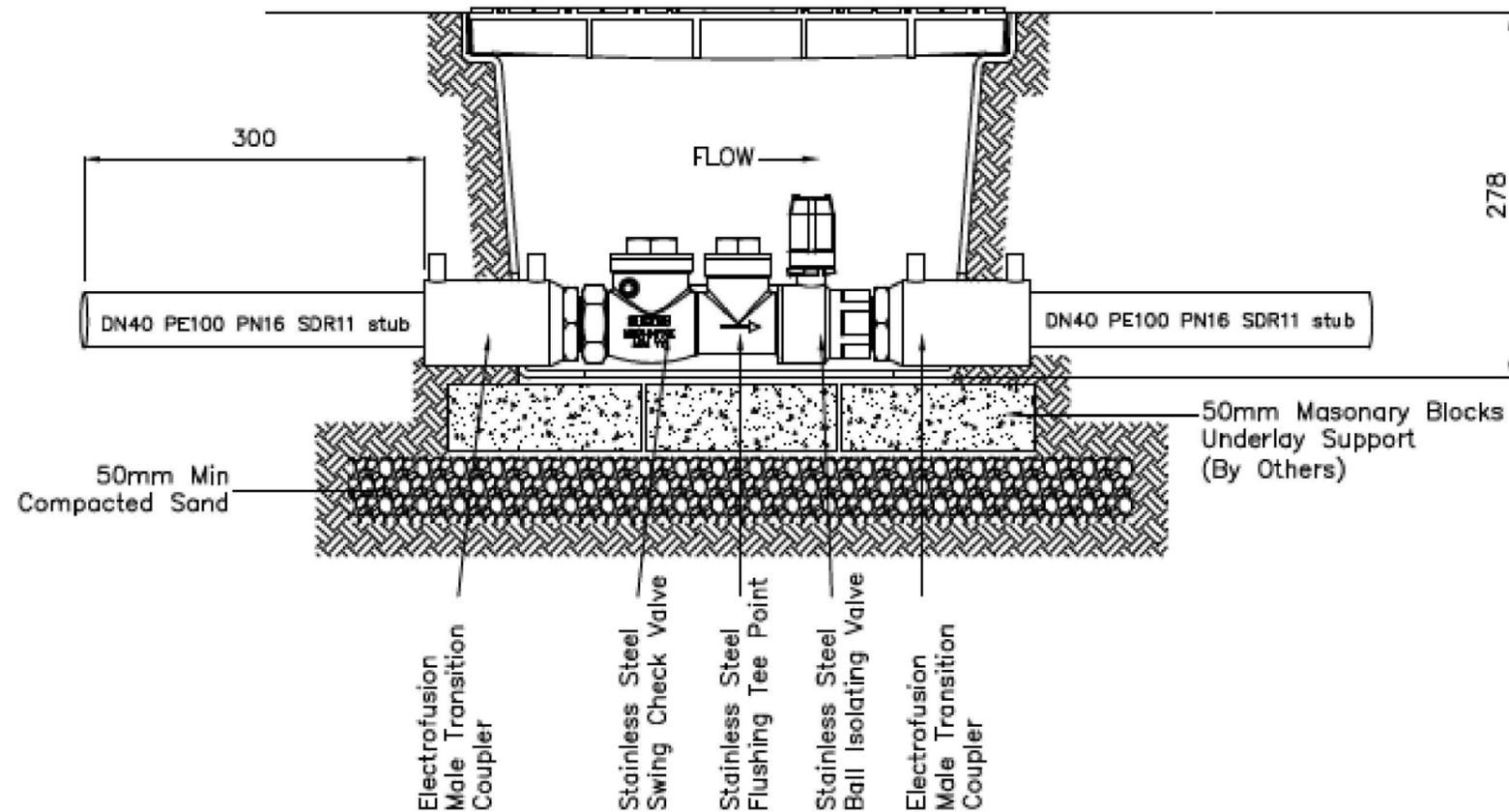
DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	NTS @ A3	FOR APPROVAL	
DWG NUMBER	REVISION		
DD684	B		

NOTES:
SEE CONSTRUCTION NOTES DD002.

SIZE
A3



Each boundary kit supplied with
300mm length DN40 PE100 PN16 SDR11 stubs
each end E/F welded and complete unit pressure
tested to 16 Bar by Ecoflow




PHILIP COOK
WDC IQP#014

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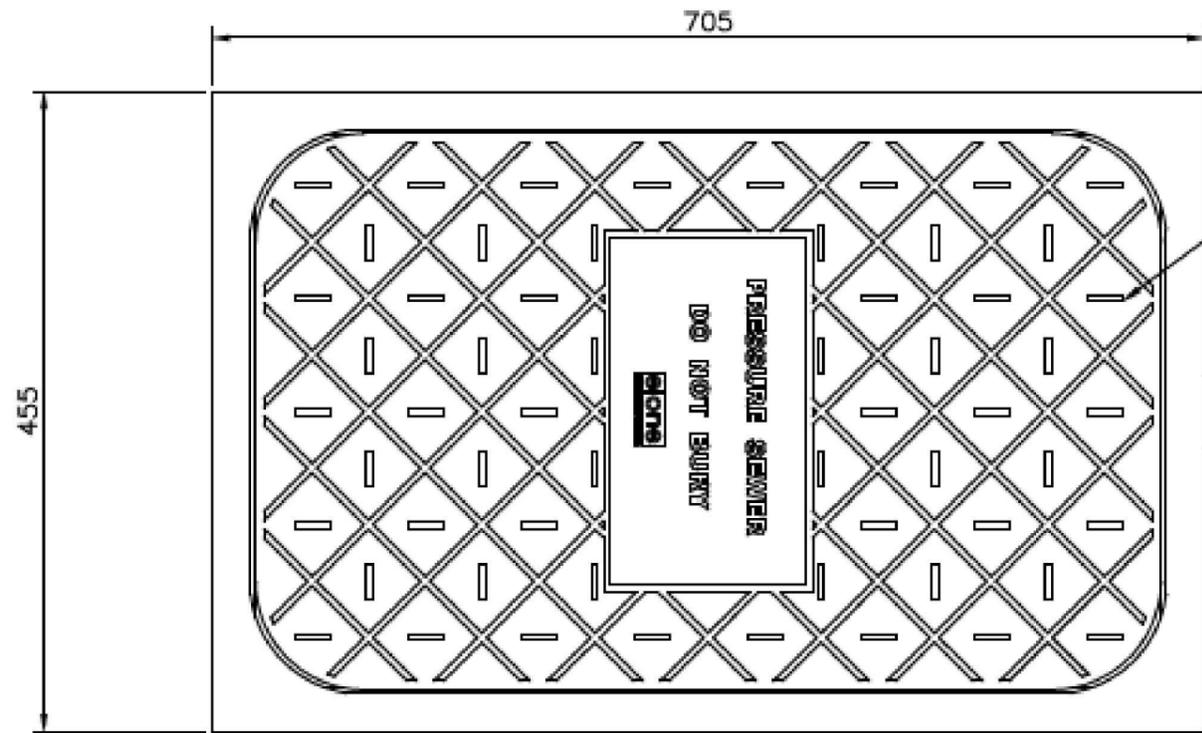


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A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

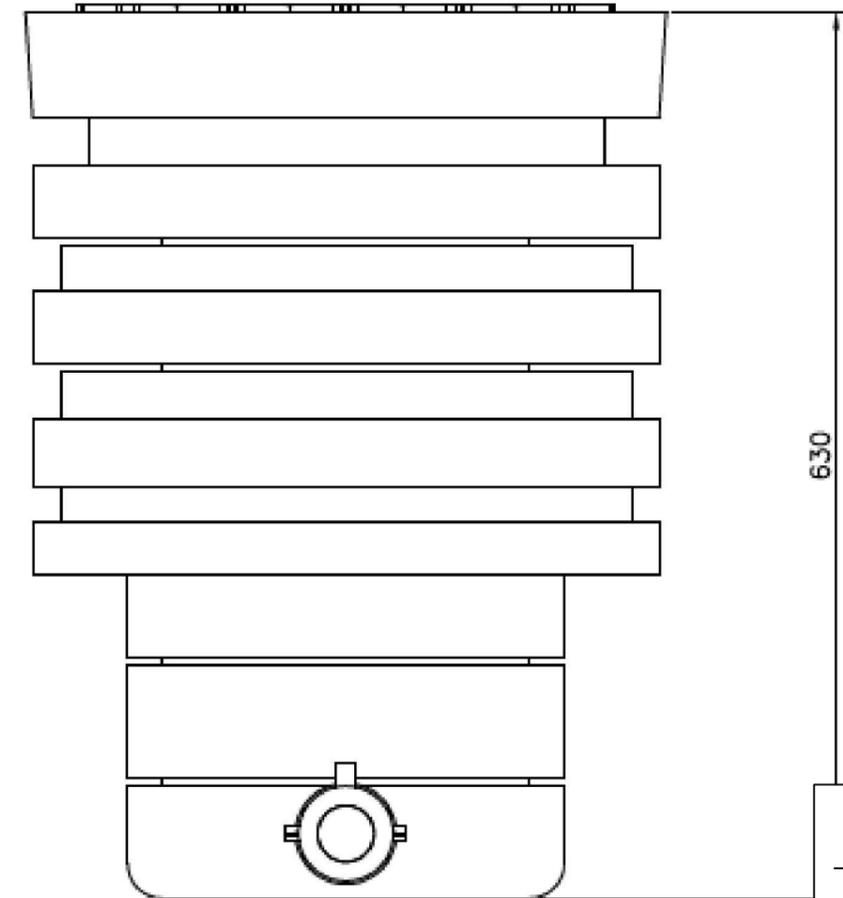
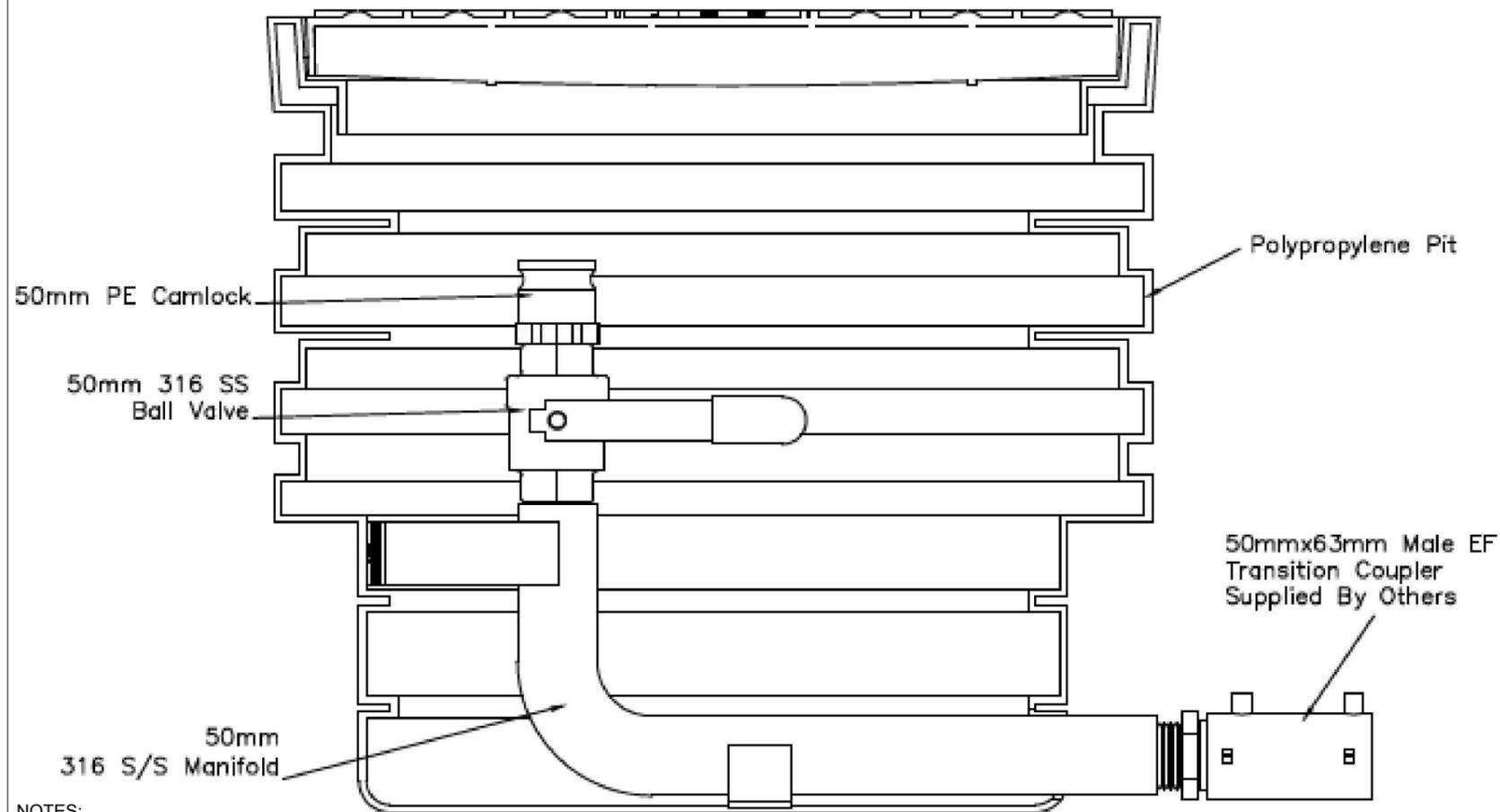
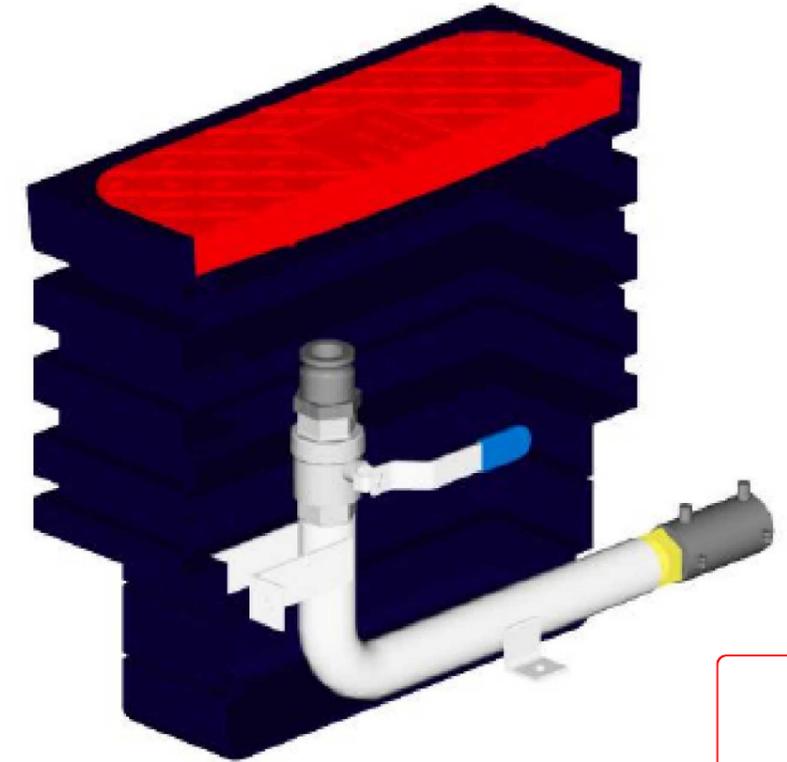
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
BOUNDARY KIT WITH EXTENDED STUBS

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE NTS @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD685		REVISION B	



Lid Material Typically Polypropylene.
Also Available in Reinforced Concrete or Galvanised Steel



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND
INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES:
SEE CONSTRUCTION NOTES DD002.


PHILIP COOK
WDC IQP#014



REV.	REVISION DETAILS	DATE	BY	APP.
C				
B	PLAN SET UPDATED	17-03-23	KH	PC
A	1st ISSUE	07-12-22	KH	PC

PROJECT DETAILS
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA

TITLE
FLUSHING POINT DETAIL

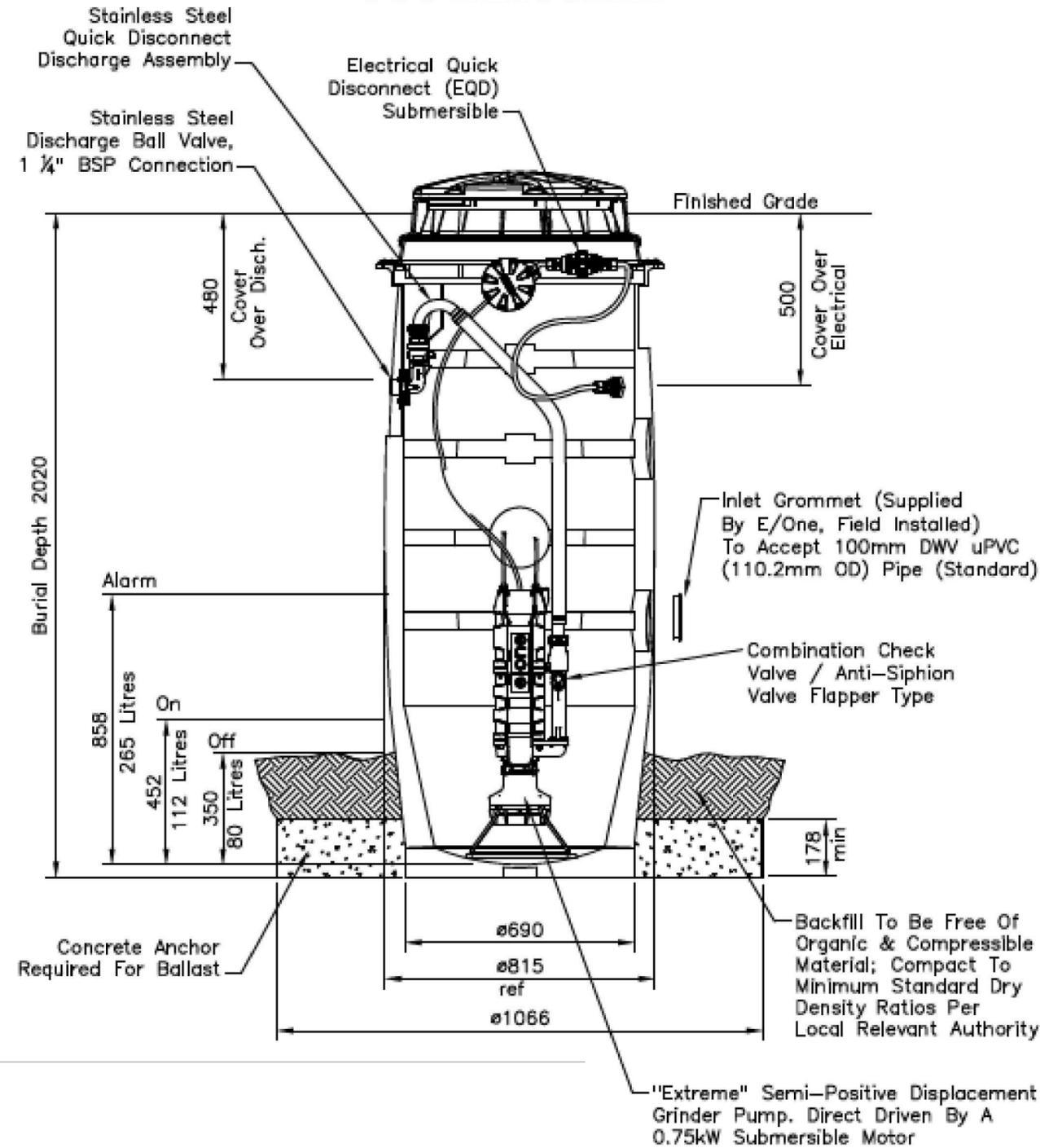
DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE NTS @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD686	REVISION B		

NOTES:
FOR CONSTRUCTION NOTES SEE SHEET DD002.

SIZE
A3

MODEL 2010iP

800 x 2100mm



IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


PHILIP COOK
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B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS

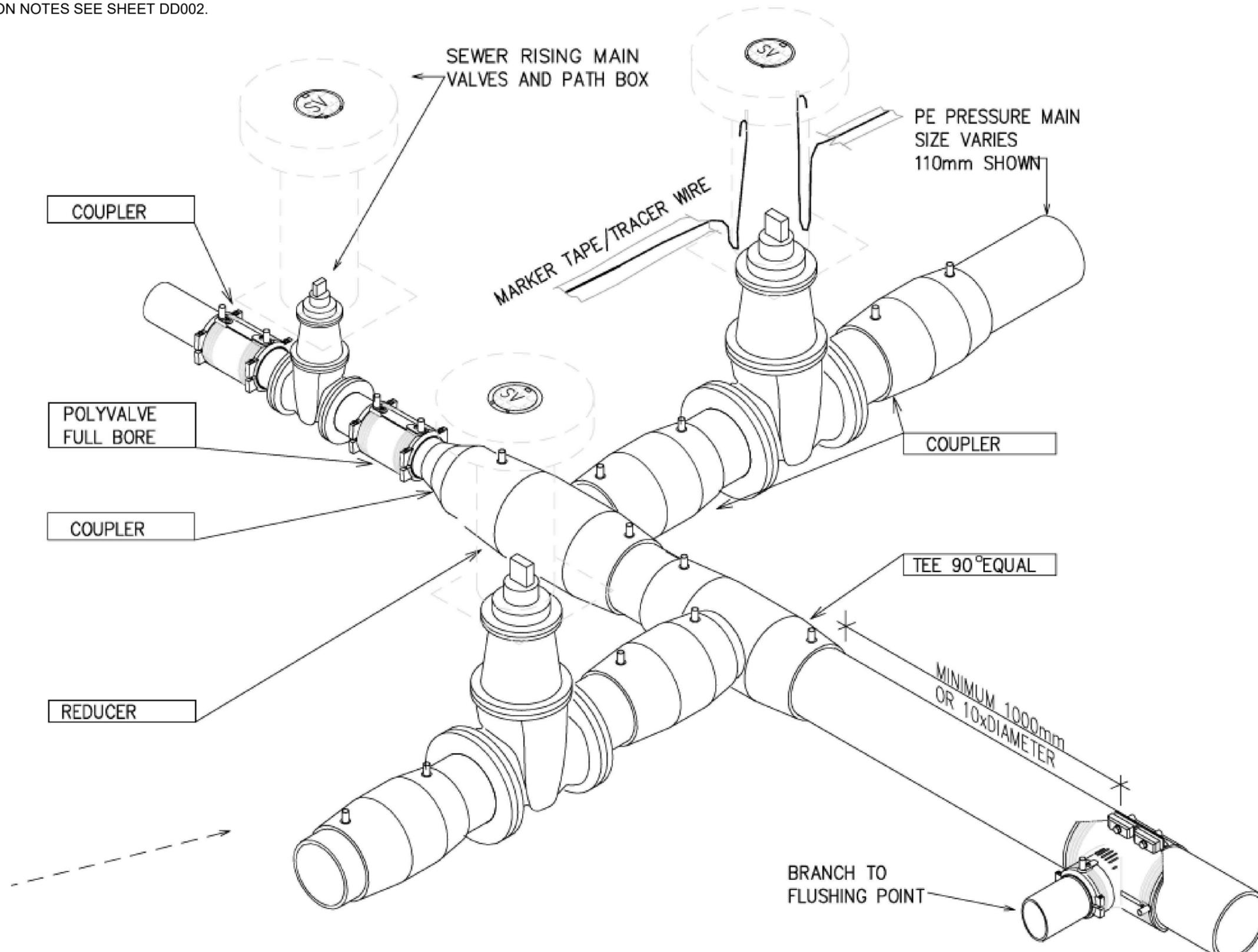
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

2010 IP SIMPLEX
800 x 2100 IP

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	NTS @ A3	STATUS		FOR APPROVAL	
DWG NUMBER	DD687	REVISION		B			

NOTES:
FOR CONSTRUCTION NOTES SEE SHEET DD002.



TYPICAL BRANCH ARRANGEMENT

IMPORTANT NOTE: PRODUCER STATEMENTS
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INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


 PHILIP COOK
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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	17-03-23 KH	PC
A	1st ISSUE	07-12-22 KH	PC

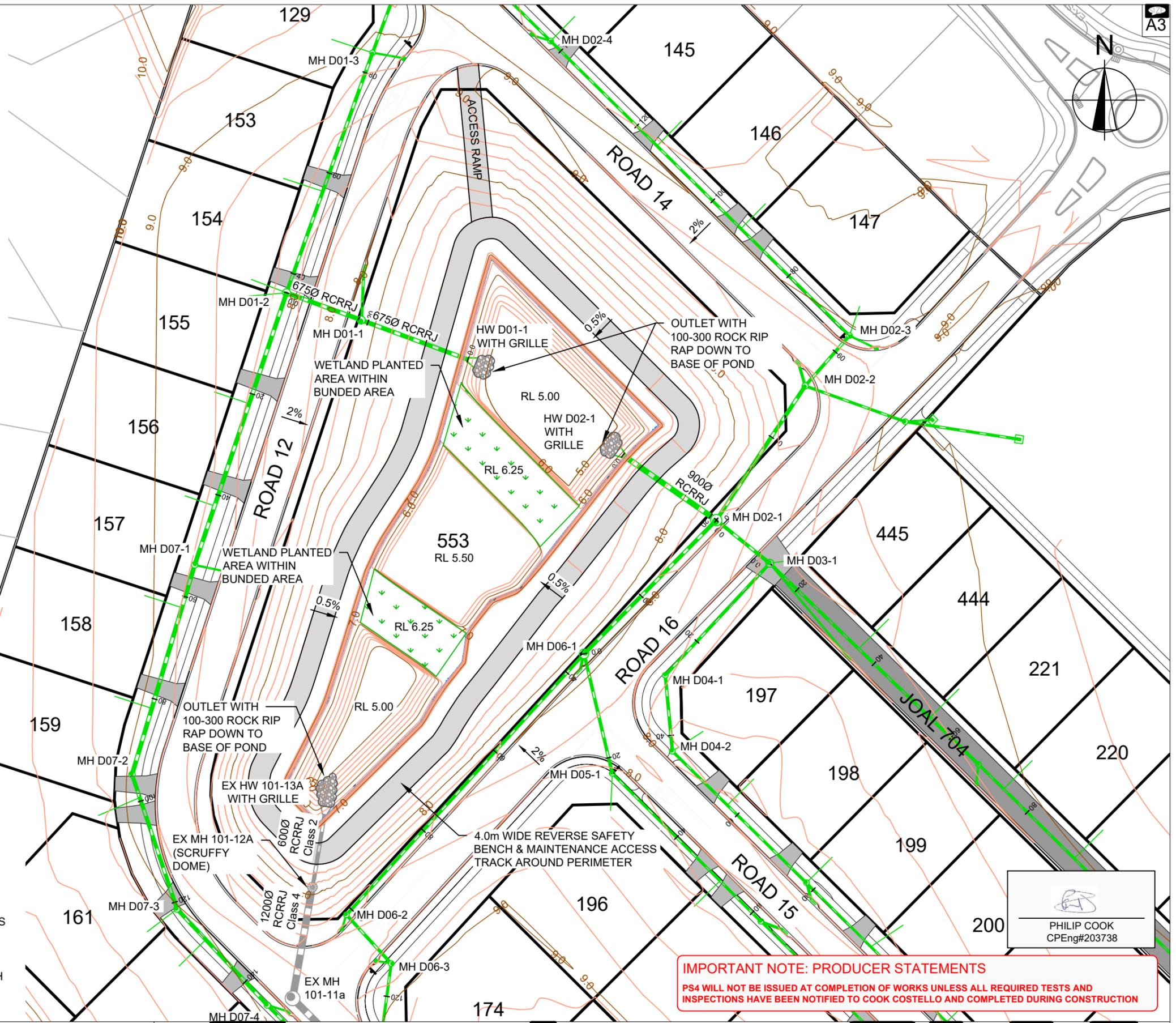
PROJECT DETAILS	TITLE
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	TYPICAL BRANCH ARRANGEMENT

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE NTS @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD688		REVISION B	



LEGEND

-  PROPOSED STORMWATER PIPES AS PER LONGSECTIONS
-  PROPOSED STORMWATER CONNECTION 100mmØ
-  PROPOSED STORMWATER HYDRUA CONCRETE MANHOLES WITH STANDARD CONCRETE LIDS
-  PROPOSED STORMWATER HYDRUA CONCRETE CESSPITS
-  DESIGN CONTOURS MAJOR (1.0m INCREMENTS)
-  DESIGN CONTOURS MINOR (0.2m INCREMENTS)
-  PLANTED AREA BATHYMETRIC BUNDS



- NOTES:**
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. MANHOLE LIDS ARE TO BE ROTATED OUT OF PATHWAYS & CROSSINGS WHERE POSSIBLE.
 4. ALL PIPES 225Ø - 450Ø ARE uPVC SN8.
 5. ALL PIPES 525Ø AND ABOVE ARE HYDRUA RCRRJ CONCRETE.
 6. ALL INLET & OUTLET STRUCTURES WITH PIPE >375 TO BE FITTED WITH THE RELEVANT HYNDS WINGWALL GRILLE FOR THE HEADWALL SIZE.
 7. SEE APPROVED LANDSCAPING PLAN FOR POND PLANTING DETAIL.

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION


 PHILIP COOK
 CPEng#203738



C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	

WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

POND DETAILS

07/12/2022	K HANSARD	R BROOKES	P COOK
14333-009		1:750 @ A3	FOR APPROVAL
		DD690	B

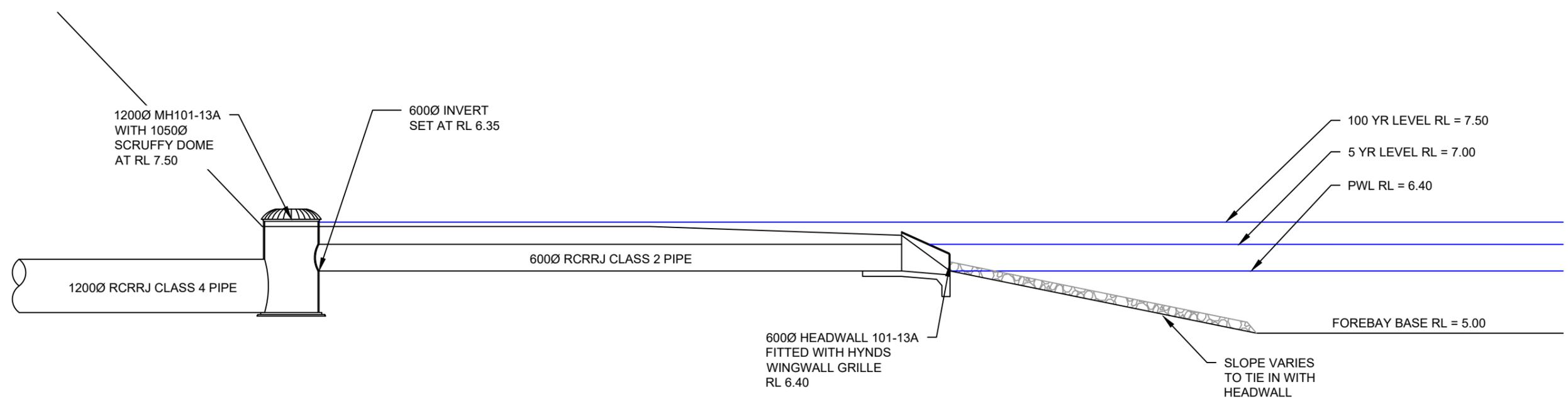
SCALE 1:750
 30
 20
 10
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IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



PHILIP COOK
 CPEng#203738

NOTES:
 1. SEE CONSTRUCTION NOTES DD002.



POND X-SECTION
 SCALE 1:100

4 SCALE 1:100
 2
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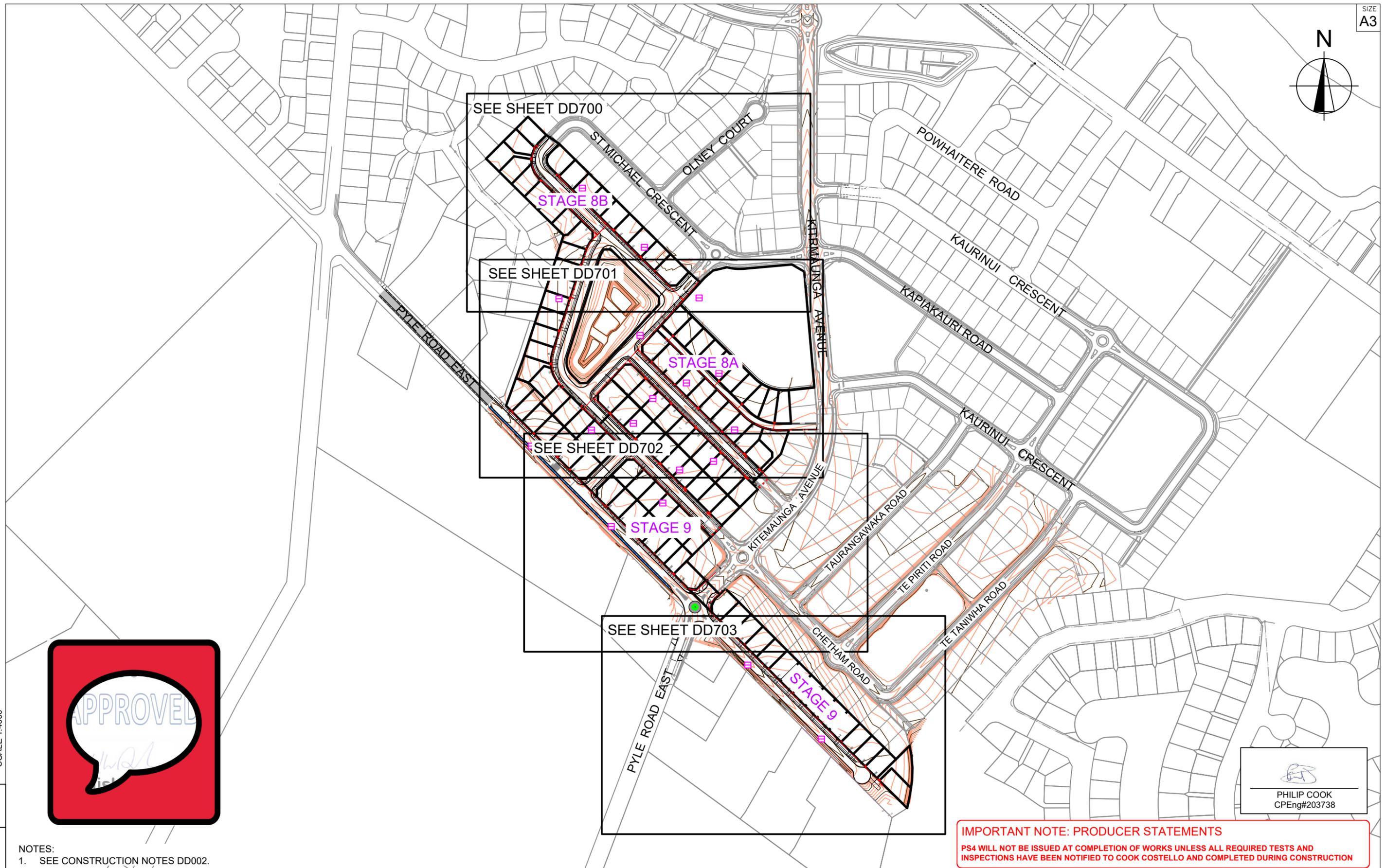
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C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC

WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

POND CROSS SECTIONS

07/12/2022	K HANSARD	R BROOKES	P COOK
14333-009	1:250 @ A3		FOR APPROVAL
DD691	B		



SCALE 1:4000
150
100
50
0



NOTES:
1. SEE CONSTRUCTION NOTES DD002.


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
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C			
B	PLAN SET UPDATED	07-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

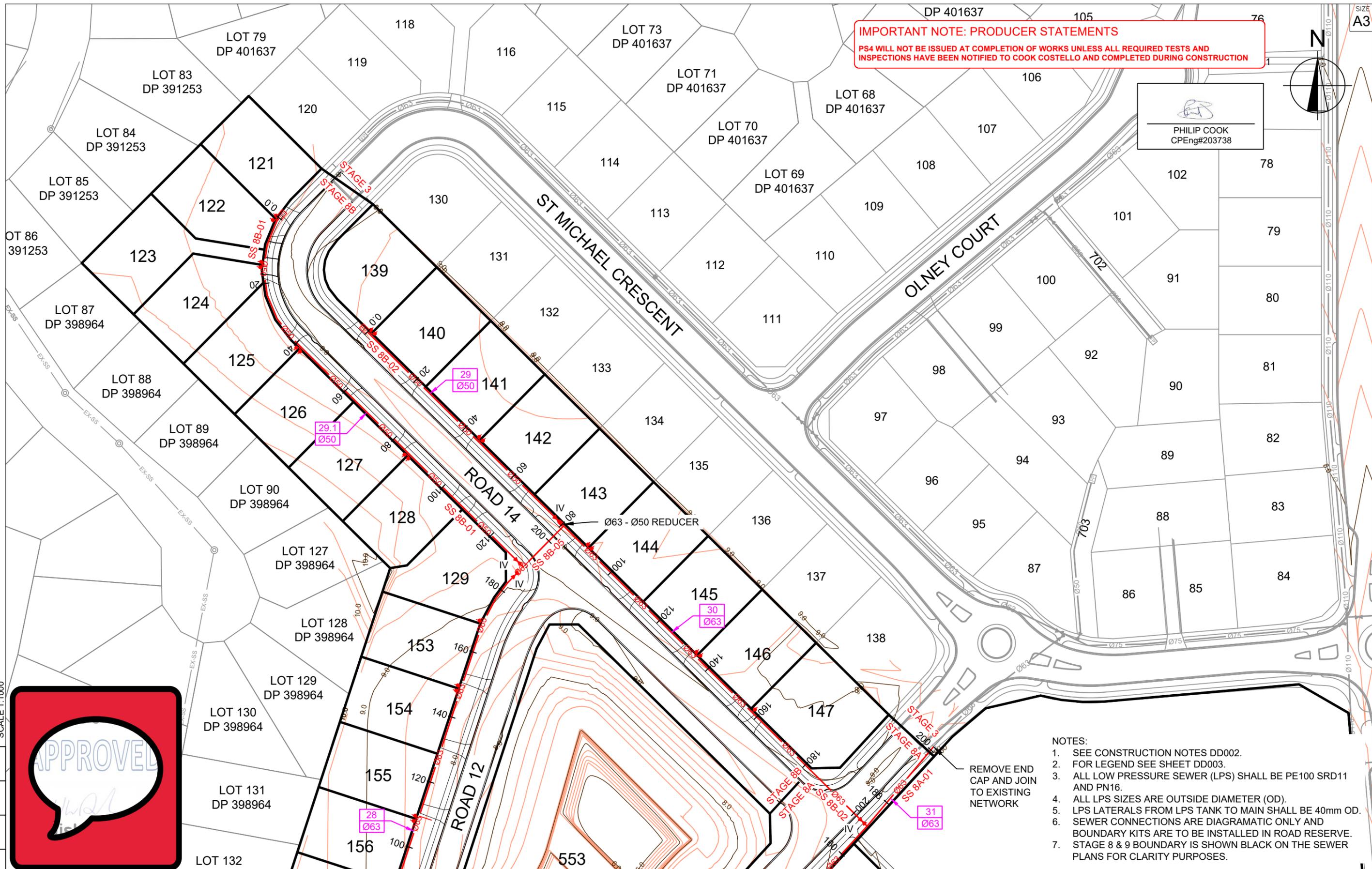
TITLE
SANITARY SEWER PLAN
OVERVIEW

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:4000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD700	REVISION	B				

SCALE 1:4000
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IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

PHILIP COOK
CPEng#203738



- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 4. ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 5. LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.
 6. SEWER CONNECTIONS ARE DIAGRAMATIC ONLY AND BOUNDARY KITS ARE TO BE INSTALLED IN ROAD RESERVE.
 7. STAGE 8 & 9 BOUNDARY IS SHOWN BLACK ON THE SEWER PLANS FOR CLARITY PURPOSES.

REMOVE END CAP AND JOIN TO EXISTING NETWORK



C			
B	PLAN SET UPDATED	07-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

SANITARY SEWER PLAN
SHEET 1

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD701	REVISION	B				

SCALE 1:1000

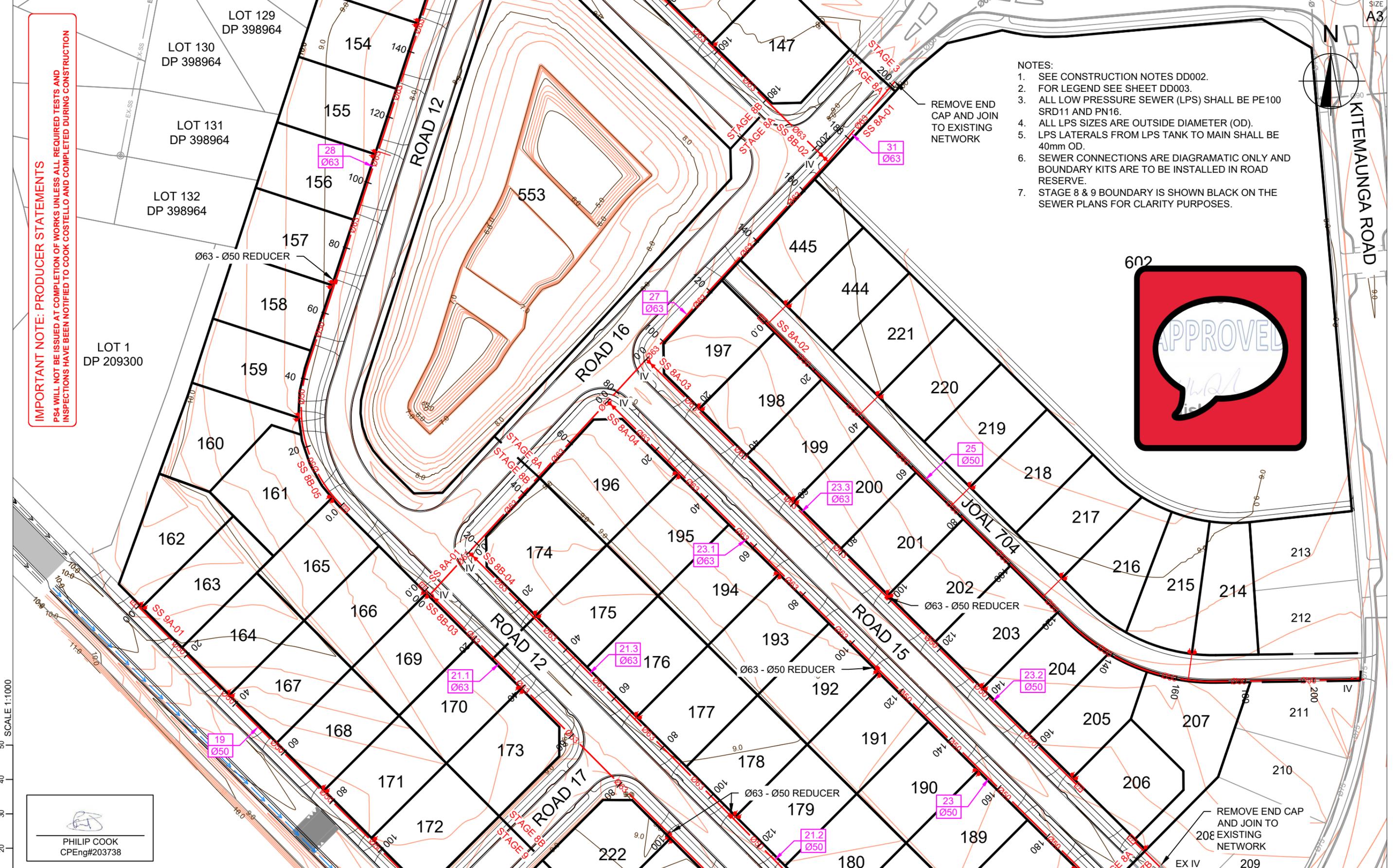


KITEMAUNGA ROAD

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 4. ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
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 6. SEWER CONNECTIONS ARE DIAGRAMATIC ONLY AND BOUNDARY KITS ARE TO BE INSTALLED IN ROAD RESERVE.
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IMPORTANT NOTE: PRODUCER STATEMENTS
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SCALE 1:1000

PHILIP COOK
CPEng#203738

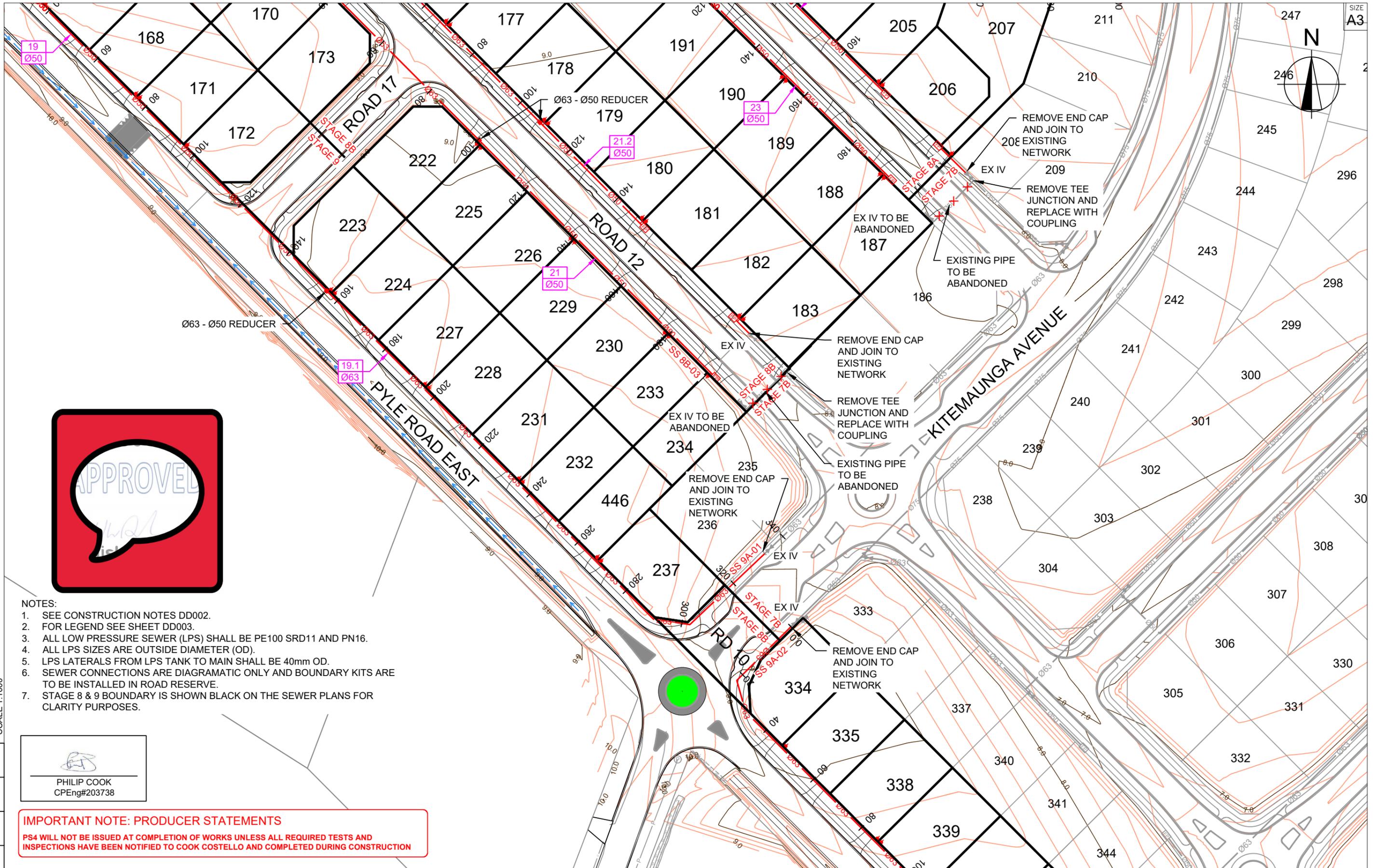


C			
B	PLAN SET UPDATED	07-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS		DRAWN APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER PLAN
SHEET 2

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD702	REVISION	B				



- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 4. ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 5. LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.
 6. SEWER CONNECTIONS ARE DIAGRAMATIC ONLY AND BOUNDARY KITS ARE TO BE INSTALLED IN ROAD RESERVE.
 7. STAGE 8 & 9 BOUNDARY IS SHOWN BLACK ON THE SEWER PLANS FOR CLARITY PURPOSES.

PHILIP COOK
CPEng#203738

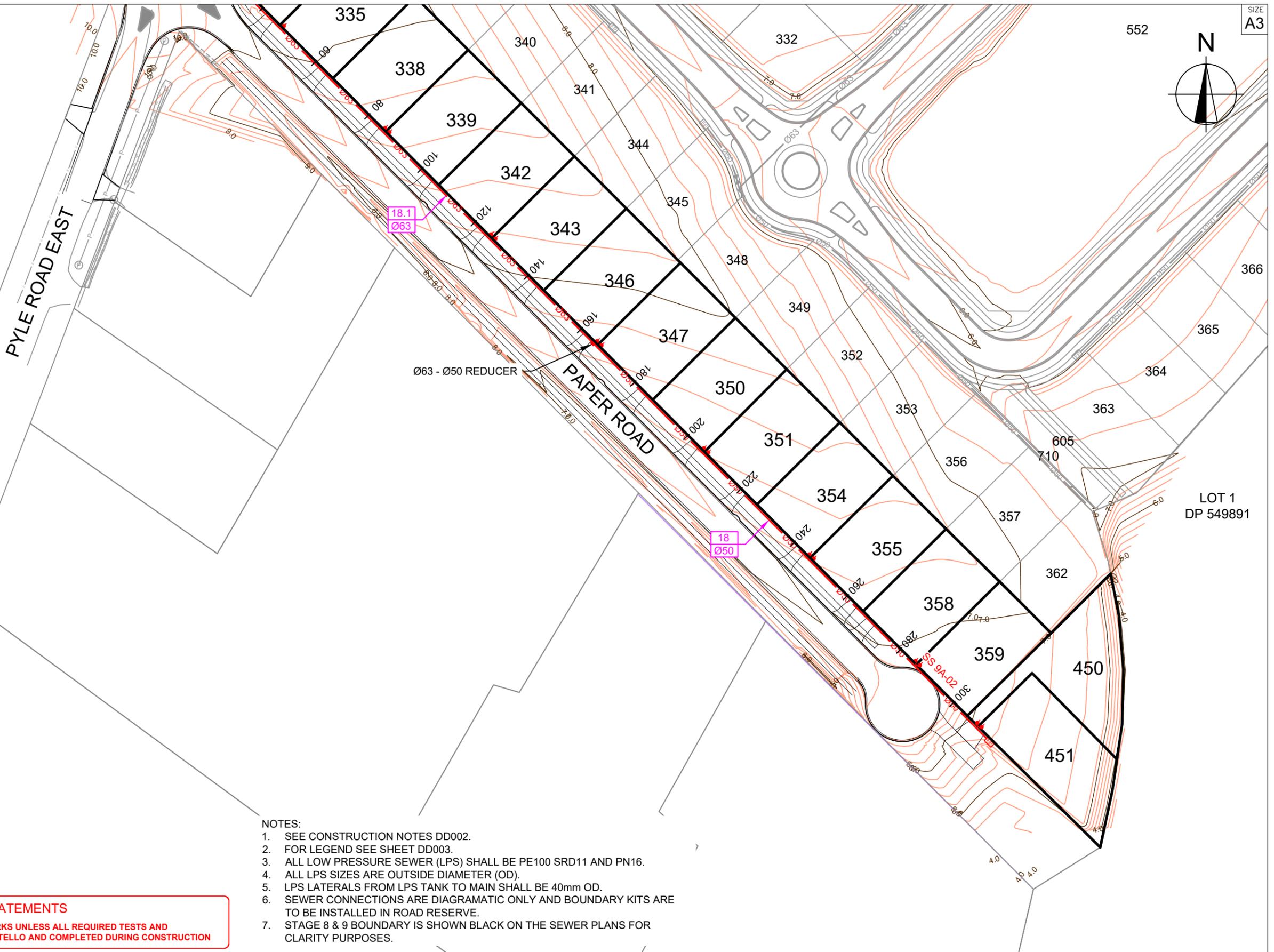
IMPORTANT NOTE: PRODUCER STATEMENTS
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C			
B	PLAN SET UPDATED	07-03-23	
A	1st ISSUE	07-12-22	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS	TITLE
WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	SANITARY SEWER PLAN SHEET 3

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:1000 @ A3	FOR APPROVAL	
DWG NUMBER	REVISION		
DD703	B		



- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.
 3. ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 4. ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 5. LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.
 6. SEWER CONNECTIONS ARE DIAGRAMATIC ONLY AND BOUNDARY KITS ARE TO BE INSTALLED IN ROAD RESERVE.
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 PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
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50 SCALE 1:1000
40
30
20
10
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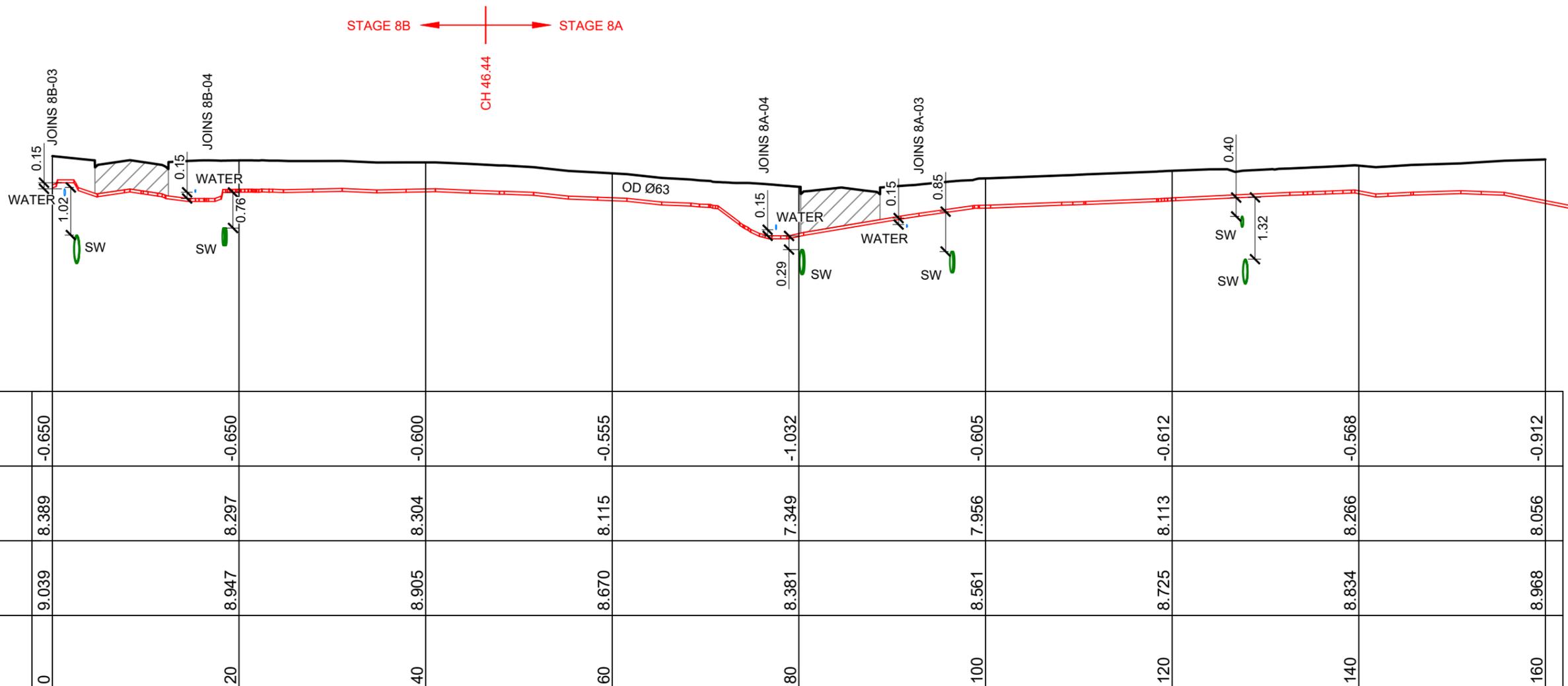


C			
B	PLAN SET UPDATED	07-03-23	
		KH PC	
A	1st ISSUE	07-12-22	
		KH PC	
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
 WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
 SANITARY SEWER PLAN
 SHEET 4

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD704			REVISION	B		



HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8A-01

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
 EXSS = EXISTING SANITARY SEWER
 EXSW = EXISTING STORMWATER
 SS = PROPOSED SANITARY SEWER
 WATER = POTABLE WATER

BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
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C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

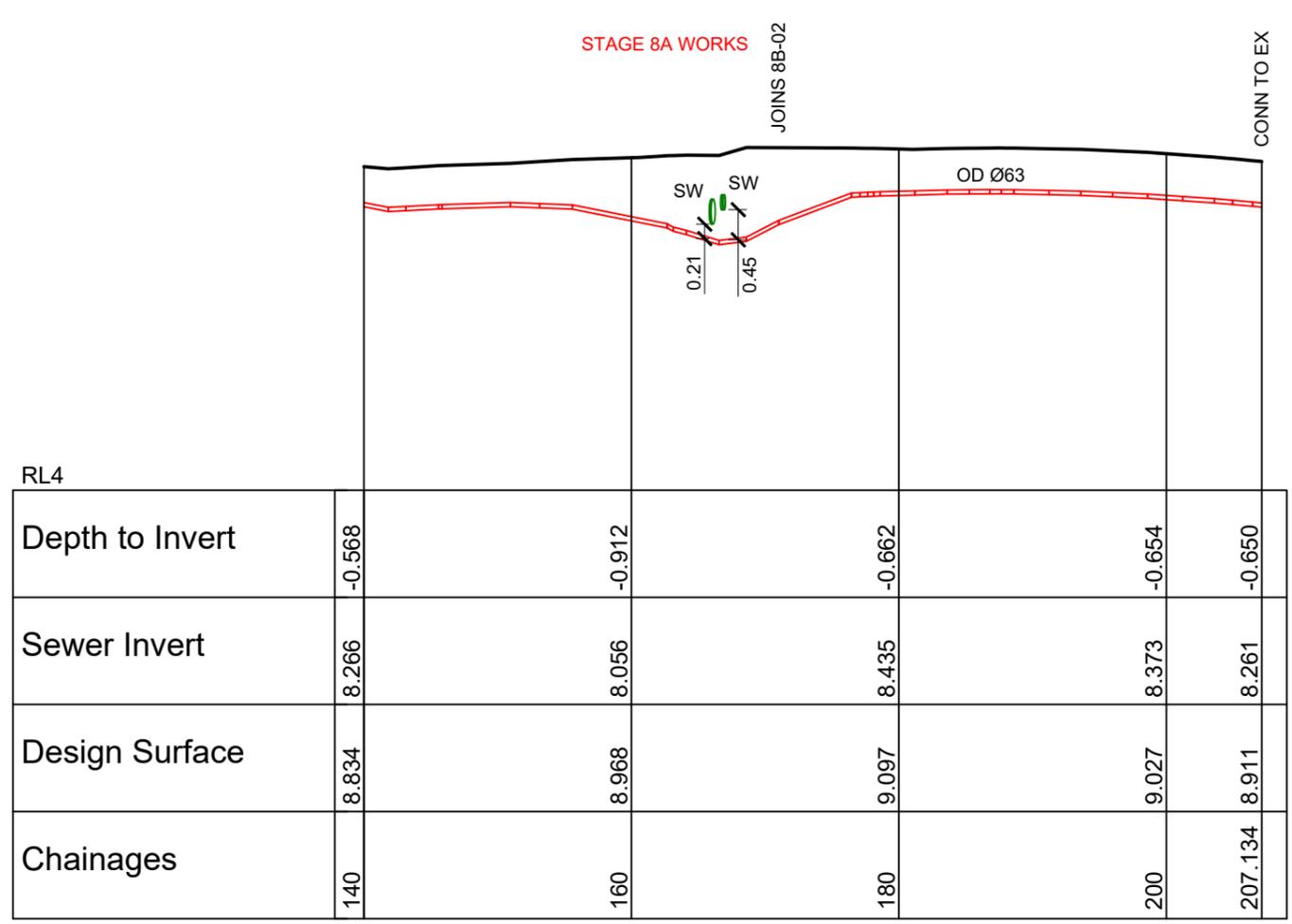
TITLE
SANITARY SEWER LONGSECTIONS
 SHEET1

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD710		REVISION	B			

SCALE 1:500

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HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8A-01 CONT.

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

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BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
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SCALE 1:100



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

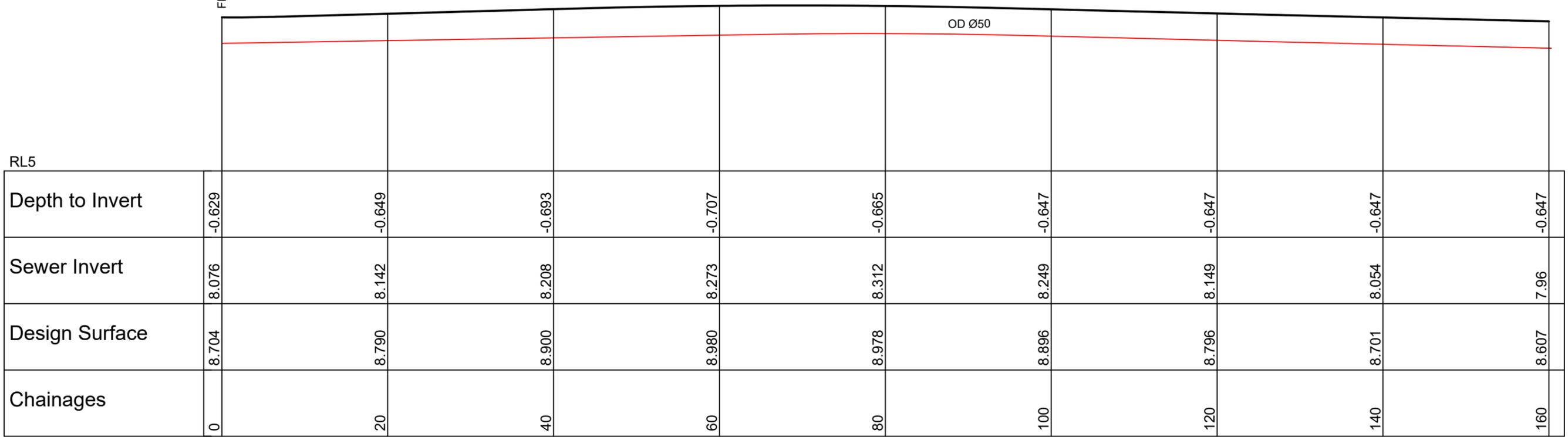
TITLE
SANITARY SEWER LONGSECTIONS
 SHEET2

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD711		REVISION	B			

SCALE 1:500

STAGE 8A WORKS

FLUSH POINT



HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - 8A-02

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
- ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
- LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:

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- WATER = POTABLE WATER

BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
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SCALE 1:100



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

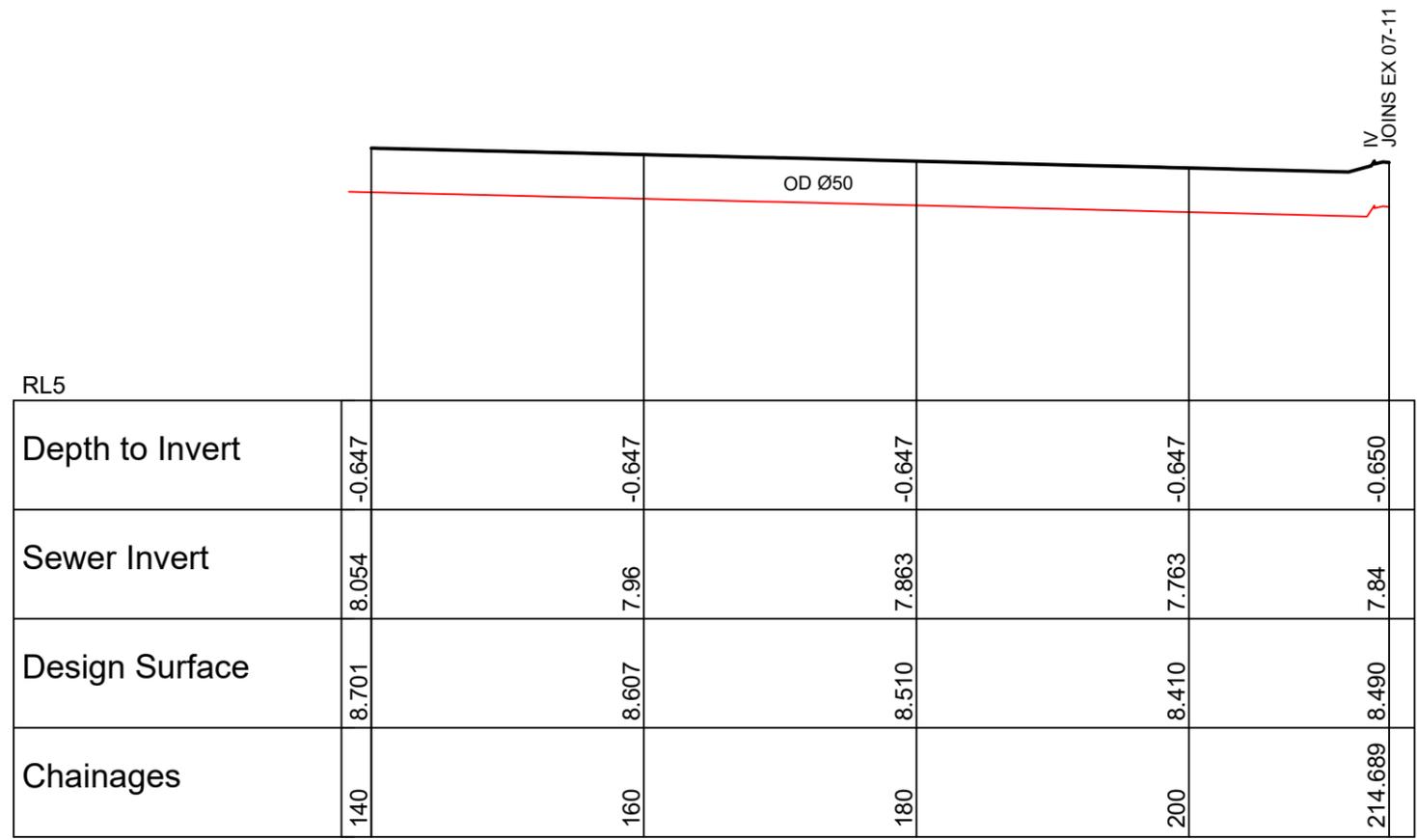
PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
 SHEET3

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:500H 1:100V	STATUS FOR APPROVAL	
DWG NUMBER DD712		REVISION B	

SCALE 1:500

STAGE 8A WORKS



HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8A-02 CONT.

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
- ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
- LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:

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- WATER = POTABLE WATER

BACKFILL

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

4 SCALE 1:100
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C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

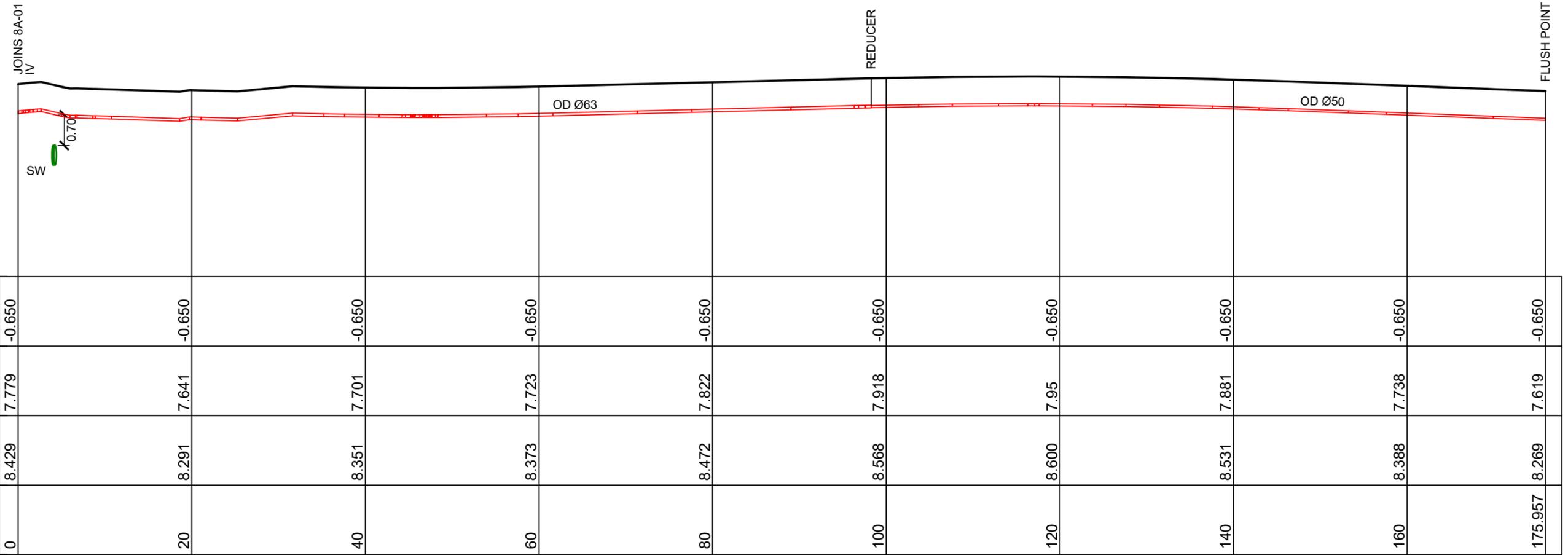
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
SHEET4

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD713		REVISION	B			

0 10 20 SCALE 1:500

STAGE 8A WORKS



HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8A-03

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
 EXSS = EXISTING SANITARY SEWER
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BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

4
2
0
SCALE 1:100



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

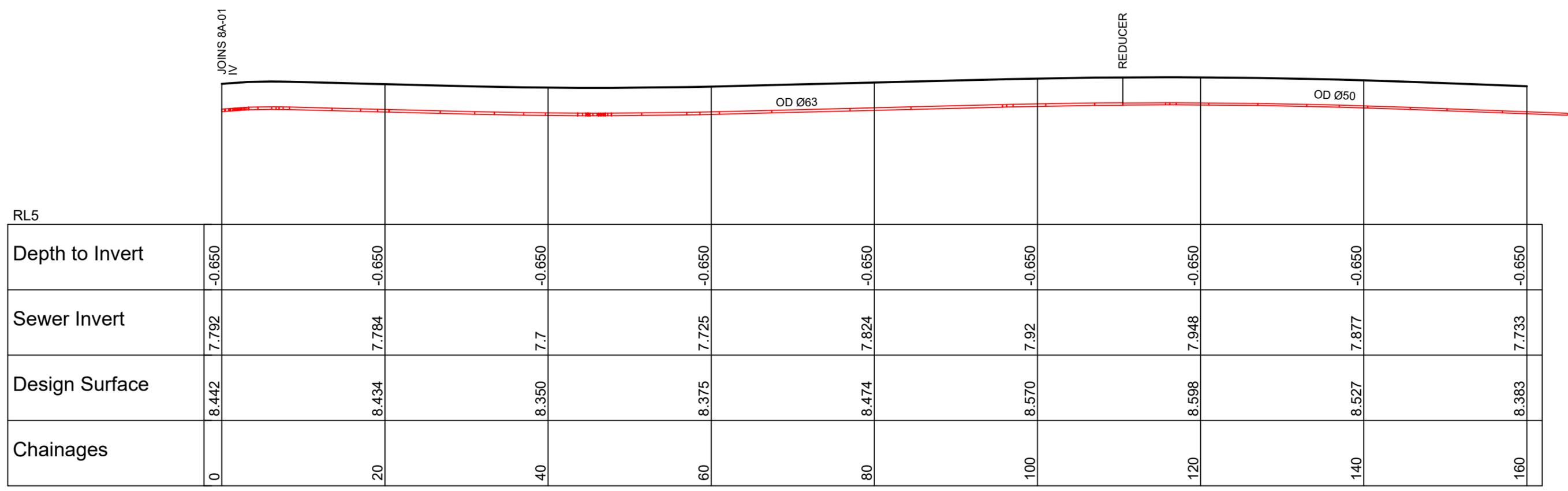
PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
 SHEET5

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD714		REVISION	B			

0 10 20 SCALE 1:500

STAGE 8A WORKS



HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8A-04

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
 EXSS = EXISTING SANITARY SEWER
 EXSW = EXISTING STORMWATER
 SS = PROPOSED SANITARY SEWER
 WATER = POTABLE WATER

BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

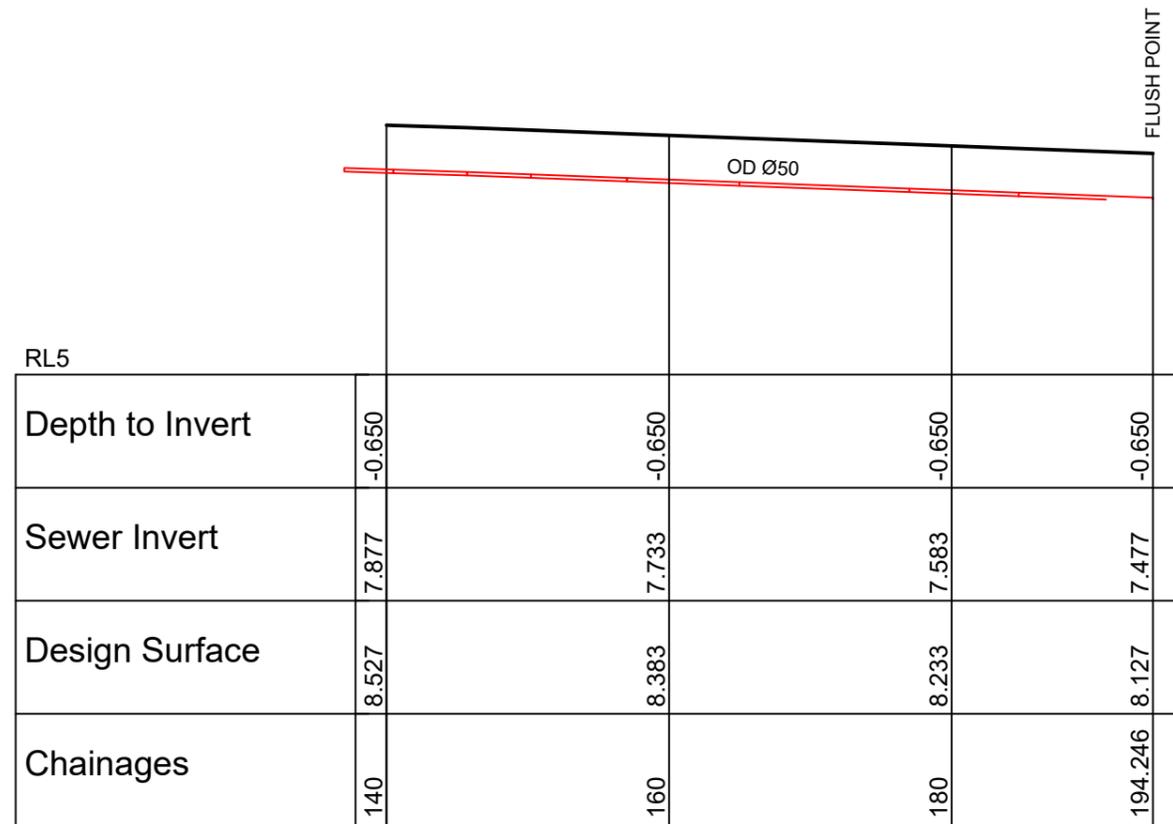
PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
 SHEET6

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD715		REVISION	B			

SCALE 1:500

STAGE 8A WORKS



HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8A-04 CONT.

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
- ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
- LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:

- EXSS = EXISTING SANITARY SEWER
- EXSW = EXISTING STORMWATER
- SS = PROPOSED SANITARY SEWER
- WATER = POTABLE WATER

BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

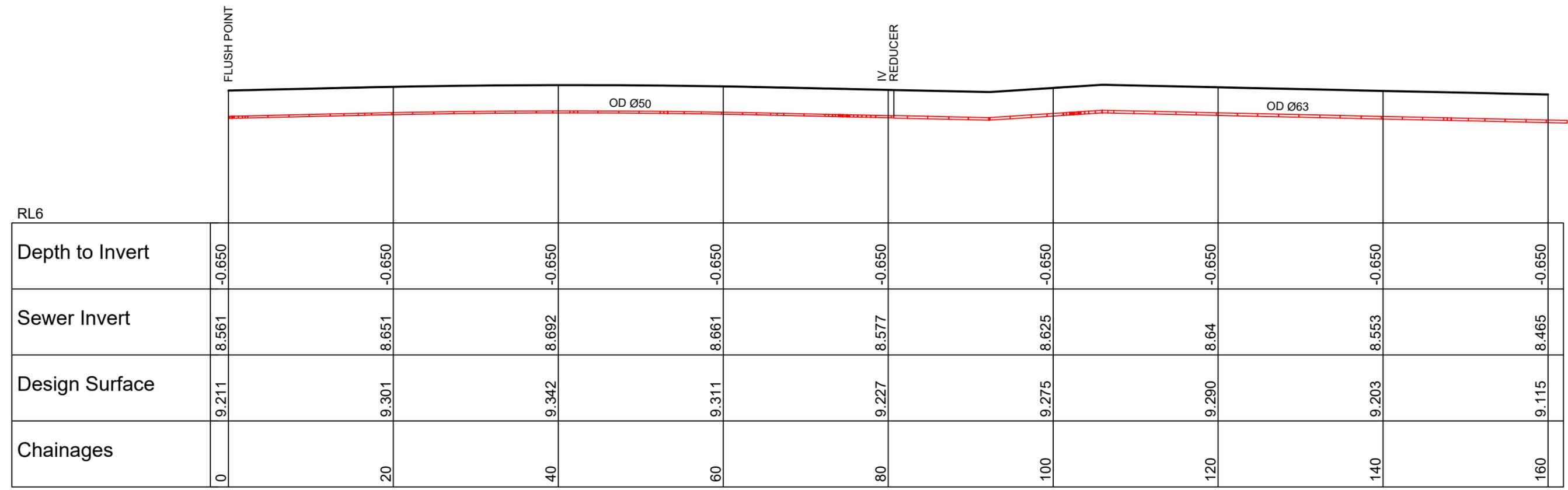
TITLE
SANITARY SEWER LONGSECTIONS
SHEET 7

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD716		REVISION	B			

SCALE 1:100

SCALE 1:500

STAGE 8B WORKS



HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8B-02

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
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 EXSW = EXISTING STORMWATER
 SS = PROPOSED SANITARY SEWER
 WATER = POTABLE WATER

BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	17-03-23	
A	1st ISSUE	07-12-22	

PROJECT DETAILS
 WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

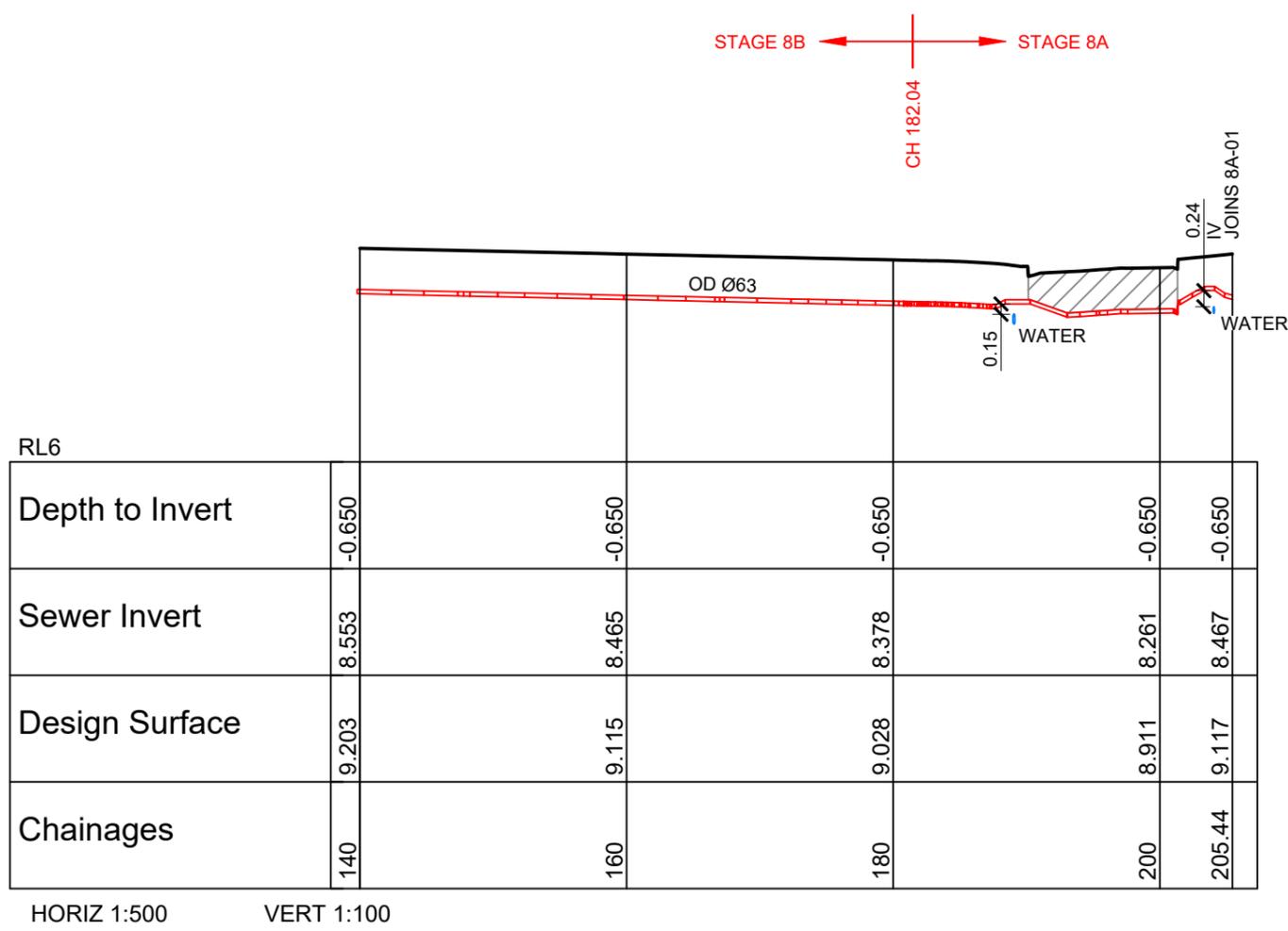
TITLE
 SANITARY SEWER LONGSECTIONS
 SHEET9

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:500H 1:100V	FOR APPROVAL	
DWG NUMBER	REVISION		
DD718	B		

SCALE 1:500

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LONGITUDINAL SECTION - SS8B-02 CONT.

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
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 WATER = POTABLE WATER

BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
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SCALE 1:100



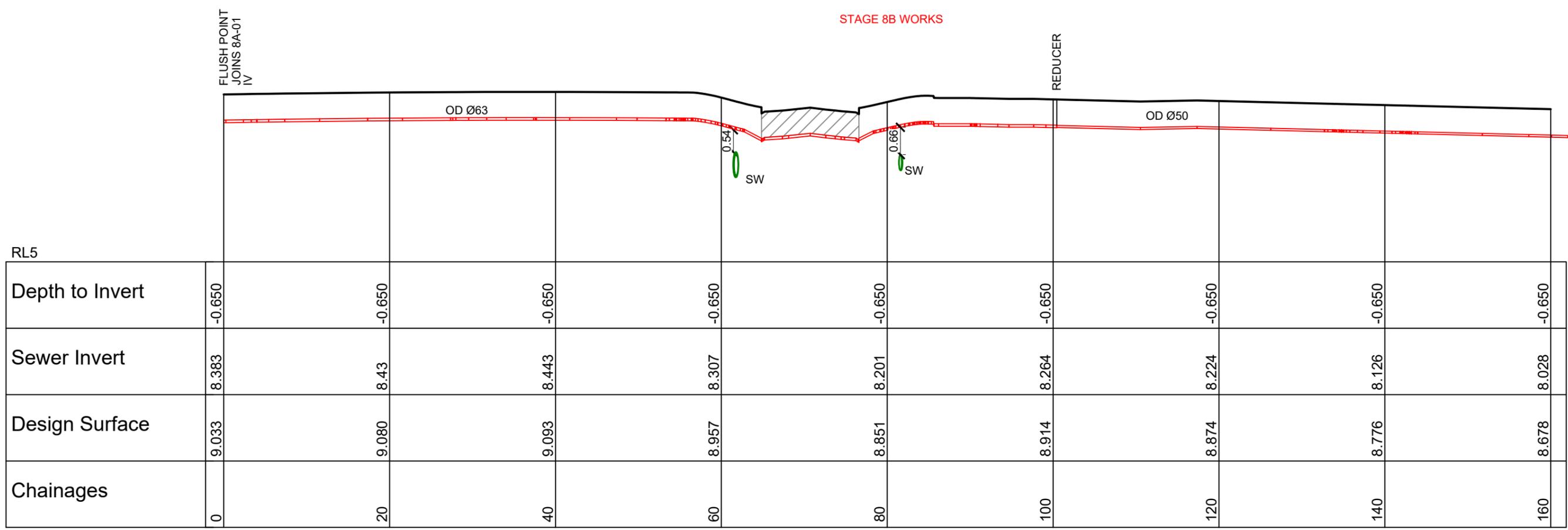
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B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
 SHEET10

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD719		REVISION	B			

SCALE 1:500



HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8B-03

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
 EXSS = EXISTING SANITARY SEWER
 EXSW = EXISTING STORMWATER
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BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

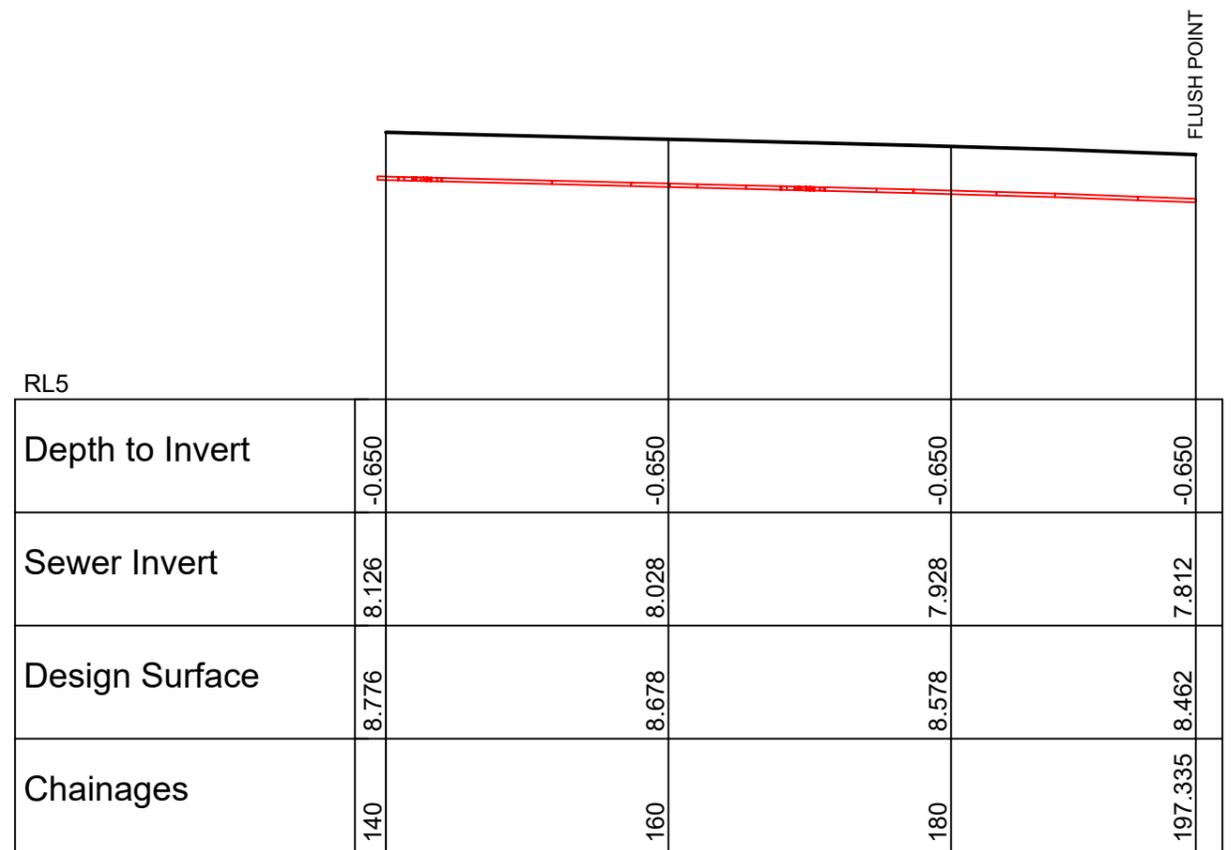
PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
 SHEET11

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD720		REVISION	B			

SCALE 1:500

STAGE 8B WORKS



HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8B-03 CONT.

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
- ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
- LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:

- EXSS = EXISTING SANITARY SEWER
- EXSW = EXISTING STORMWATER
- SS = PROPOSED SANITARY SEWER
- WATER = POTABLE WATER

BACKFILL

PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

4 SCALE 1:100
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REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

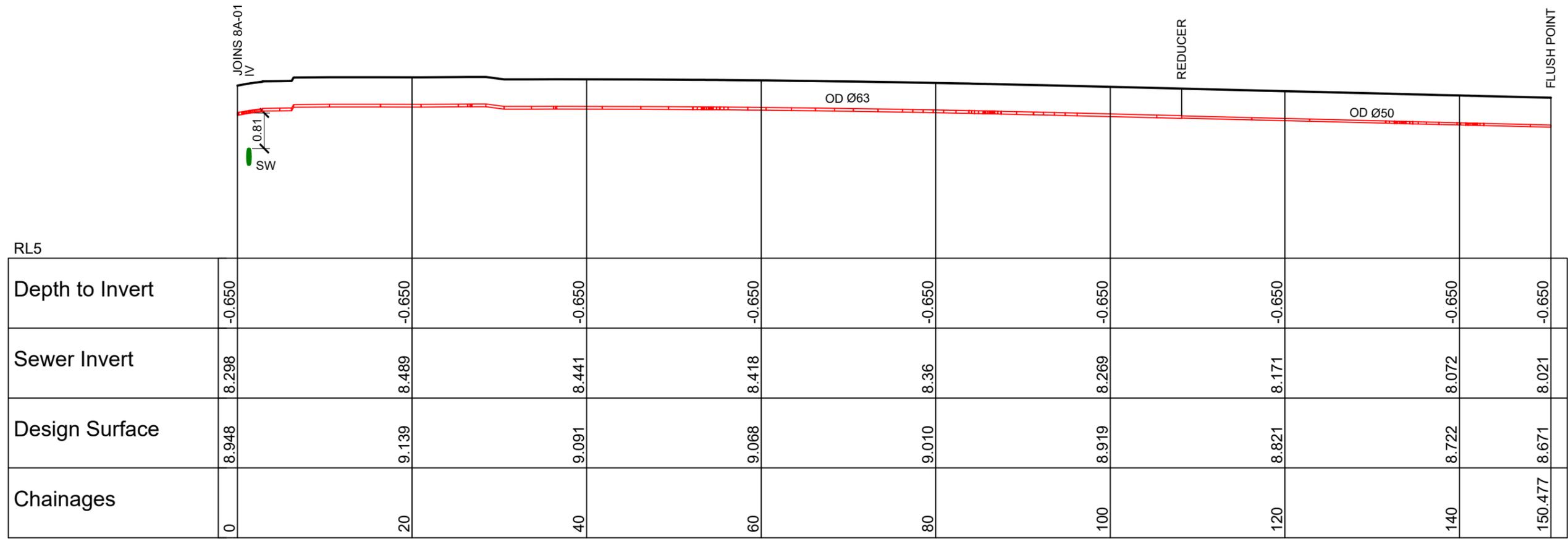
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
SHEET12

DATE CREATED	DRAWN	DESIGNED	APPROVED
07/12/2022	K HANSARD	R BROOKES	P COOK
CCL REF NO	SCALE	STATUS	
14333-009	1:500H 1:100V	FOR APPROVAL	
DWG NUMBER	REVISION		
DD721	B		

0 10 20 SCALE 1:500

STAGE 8B WORKS



HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8B-04

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
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 SS = PROPOSED SANITARY SEWER
 WATER = POTABLE WATER

BACKFILL 


 PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

4 SCALE 1:100
2
0



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
 WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

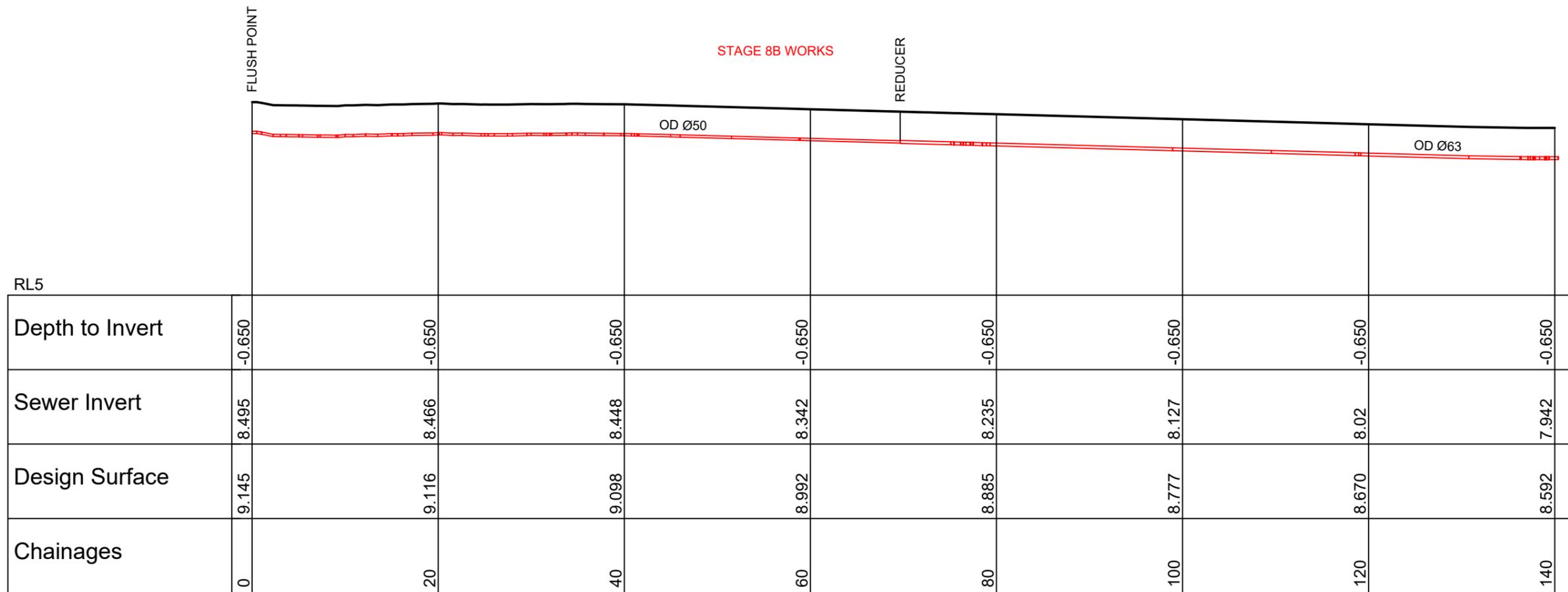
TITLE
 SANITARY SEWER LONGSECTIONS
 SHEET13

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD722	REVISION	B				

SCALE 1:500

DATE PLOTTED: Friday, March 17, 2023 04:14:18 FILE PATH: c:\12dS\temp\12dSynergy\12dSynergy\ServerService\2816\la50c1dbe-b8f0-47d6-acf2-d77bc9ae8011\14333-009-DD710_728 SS Longsections.dwg

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HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8B-05

NOTES:

- SEE CONSTRUCTION NOTES DD002.
- ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
- ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
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KEY:

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- SS = PROPOSED SANITARY SEWER
- WATER = POTABLE WATER

BACKFILL 


PHILIP COOK
CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

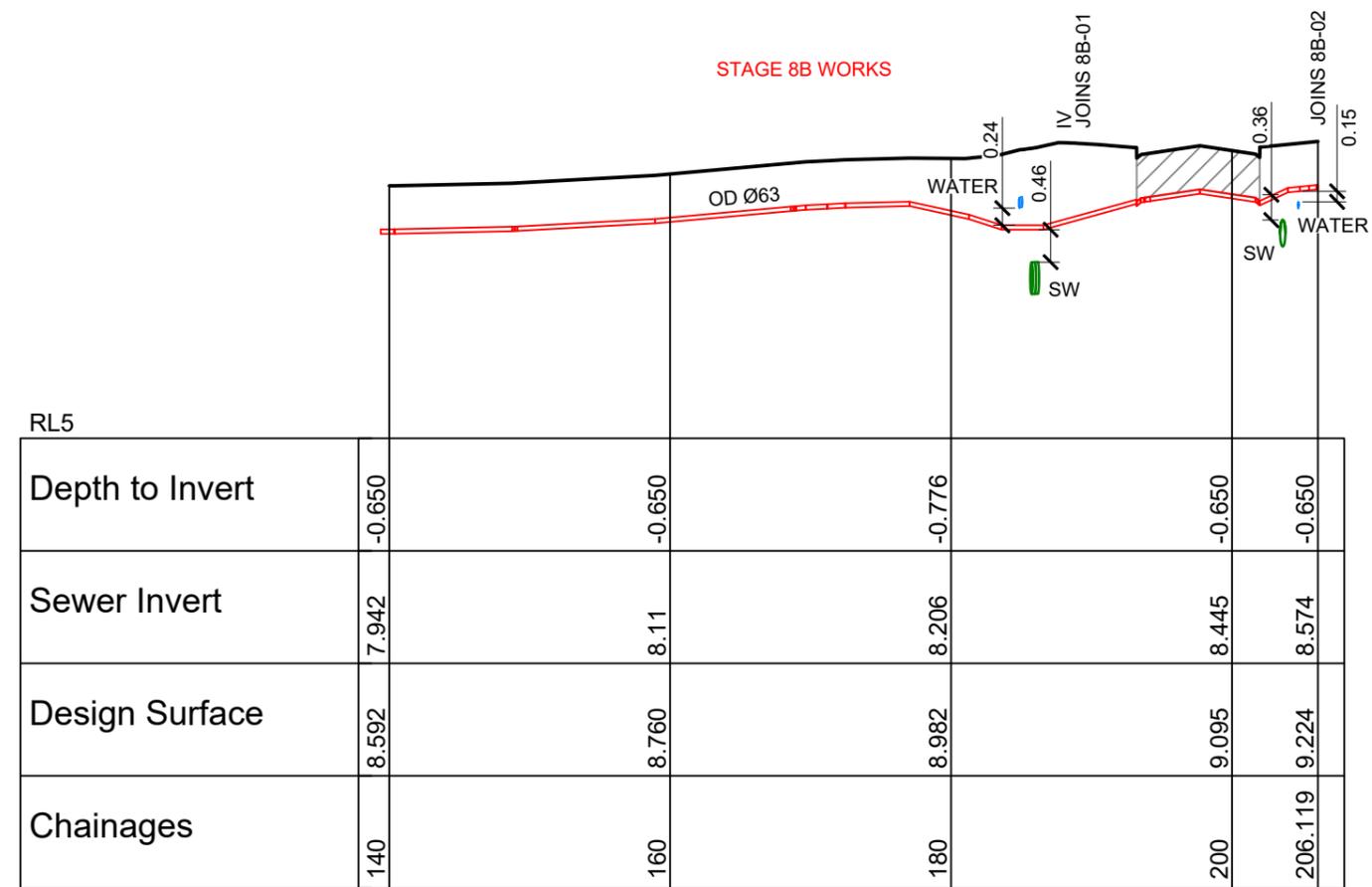
TITLE
SANITARY SEWER LONGSECTIONS
SHEET14

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD723		REVISION	B			

SCALE 1:500

DATE PLOTTED: Friday, March 17, 2023 04:14:21 FILE PATH: c:\12dS\temp\12dSynergy\12dSynergy\ServerService\2816\la50c1dbe-b8f0-47d6-acf2-d77bc9ae8011\14333-009-DD710_728 SS Longsections.dwg

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HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS8B-05 CONT.

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
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 EXSW = EXISTING STORMWATER
 SS = PROPOSED SANITARY SEWER
 WATER = POTABLE WATER

BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

4 SCALE 1:100
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C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

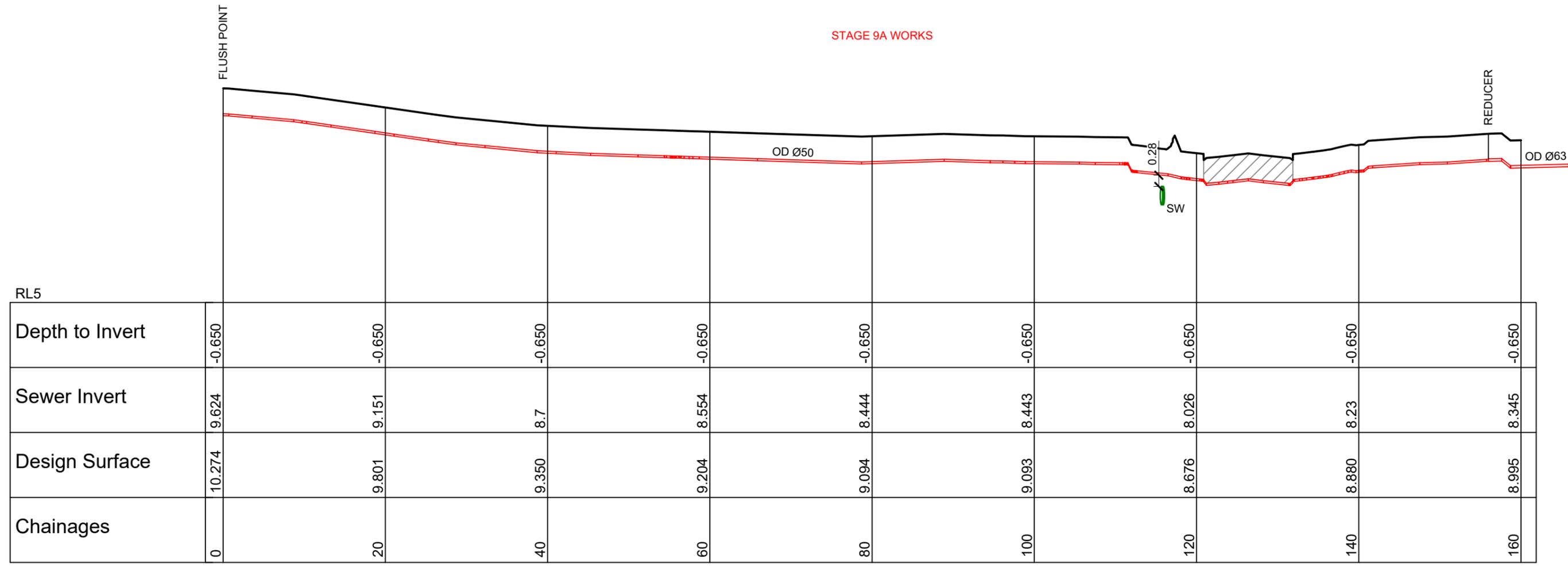
TITLE
SANITARY SEWER LONGSECTIONS
 SHEET15

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD724		REVISION	B			

SCALE 1:500

DATE PLOTTED: Friday, March 17, 2023 04:14:25 FILE PATH: c:\12dS\temp\12dSynergy\12dSynergy\ServerService\2816\la50c1dbe-b8f0-47d6-acf2-d77bc9ae8011\14333-009-DD710_728 SS Longsections.dwg

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HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS9A-01

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
 EXSS = EXISTING SANITARY SEWER
 EXSW = EXISTING STORMWATER
 SS = PROPOSED SANITARY SEWER
 WATER = POTABLE WATER

BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100



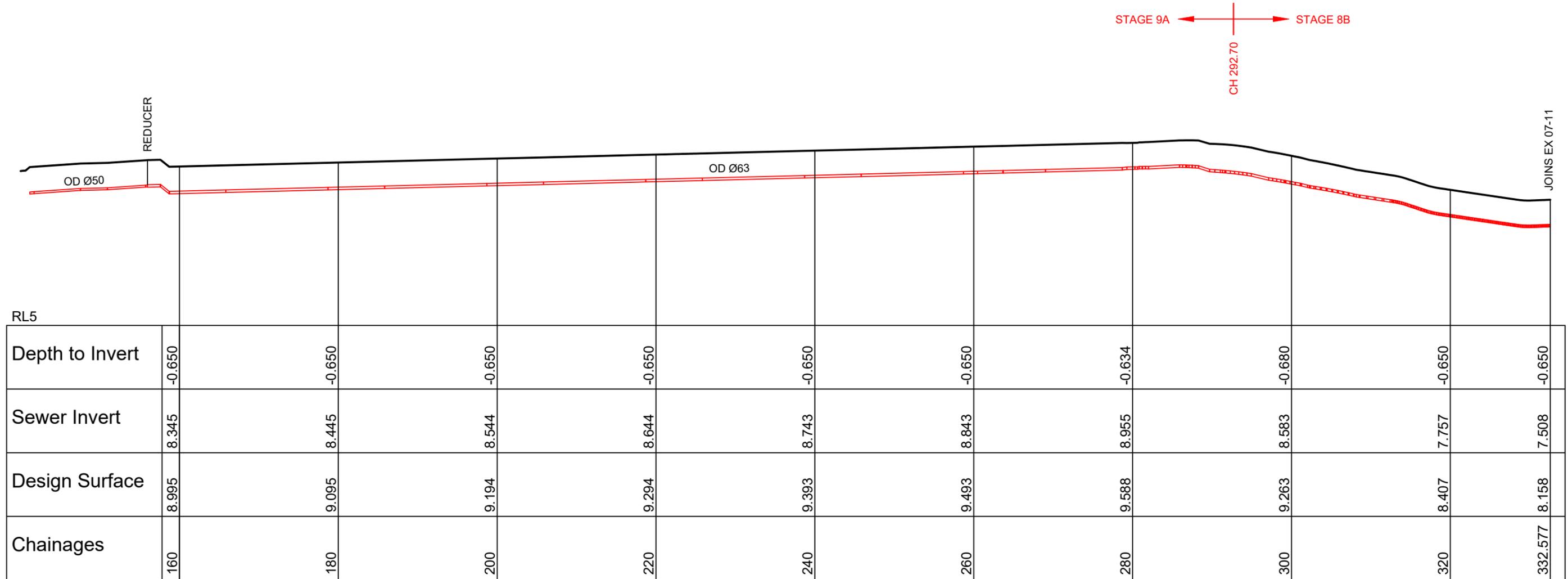
REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
 SHEET16

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD725	REVISION	B				

SCALE 1:500



HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS9A-01 CONT.

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
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 EXSW = EXISTING STORMWATER
 SS = PROPOSED SANITARY SEWER
 WATER = POTABLE WATER

BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SCALE 1:100



REV.	REVISION DETAILS	DRAWN	APP.
C			
B	PLAN SET UPDATED	KH	PC
A	1st ISSUE	KH	PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
SANITARY SEWER LONGSECTIONS
 SHEET17

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:500H 1:100V	STATUS FOR APPROVAL	
DWG NUMBER DD726		REVISION B	

STAGE 7B ← CH 5.13 → STAGE 8B ← CH 30.53 → STAGE 9A



RL2													
Depth to Invert	-0.650	-0.650	-0.650	-0.650	-0.650	-0.650	-0.650	-0.650	-0.650	-0.650	-0.650	-0.650	-0.650
Sewer Invert	7.677	8.392	8.579	8.348	8.098	7.848	7.598	7.349	7.099				
Design Surface	8.327	9.042	9.229	8.998	8.748	8.498	8.248	7.999	7.749				
Chainages	0	20	40	60	80	100	120	140	160				

HORIZ 1:500 VERT 1:100

LONGITUDINAL SECTION - SS9A-02

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - ALL LOW PRESSURE SEWER (LPS) SHALL BE PE100 SRD11 AND PN16.
 - ALL LPS SIZES ARE OUTSIDE DIAMETER (OD).
 - LPS LATERALS FROM LPS TANK TO MAIN SHALL BE 40mm OD.

KEY:
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 WATER = POTABLE WATER

BACKFILL

PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
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SCALE 1:100



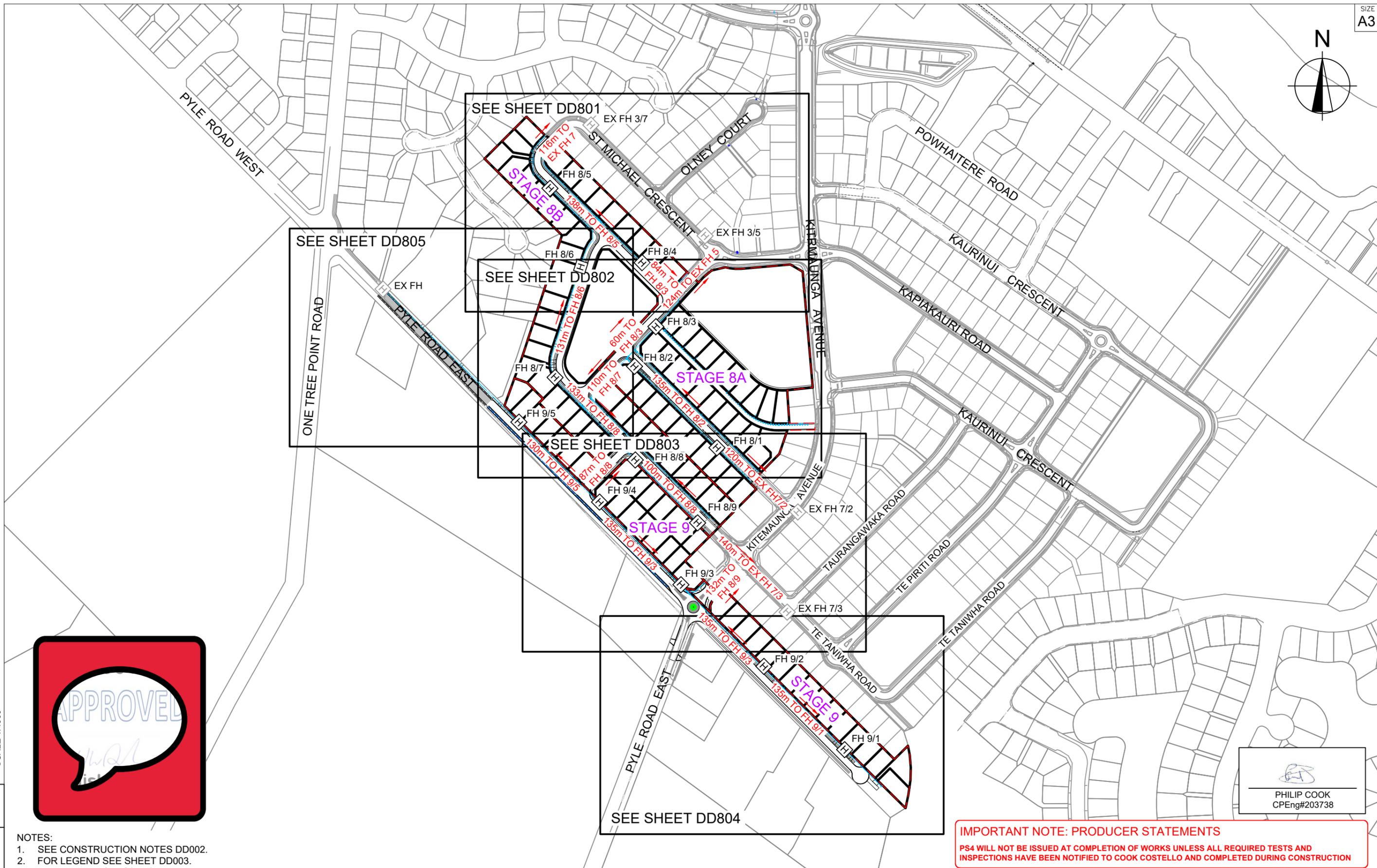
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B	PLAN SET UPDATED	17-03-23	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS
 WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

TITLE
 SANITARY SEWER LONGSECTIONS
 SHEET18

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:500H 1:100V	STATUS	FOR APPROVAL		
DWG NUMBER	DD727		REVISION	B			

SCALE 1:500




 PHILIP COOK
 CPEng#203738

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

NOTES:
 1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.

SCALE 1:4000
 150
 100
 50
 0



C			
B	POTABLE WATER UPDATED	13-12-22	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
 WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

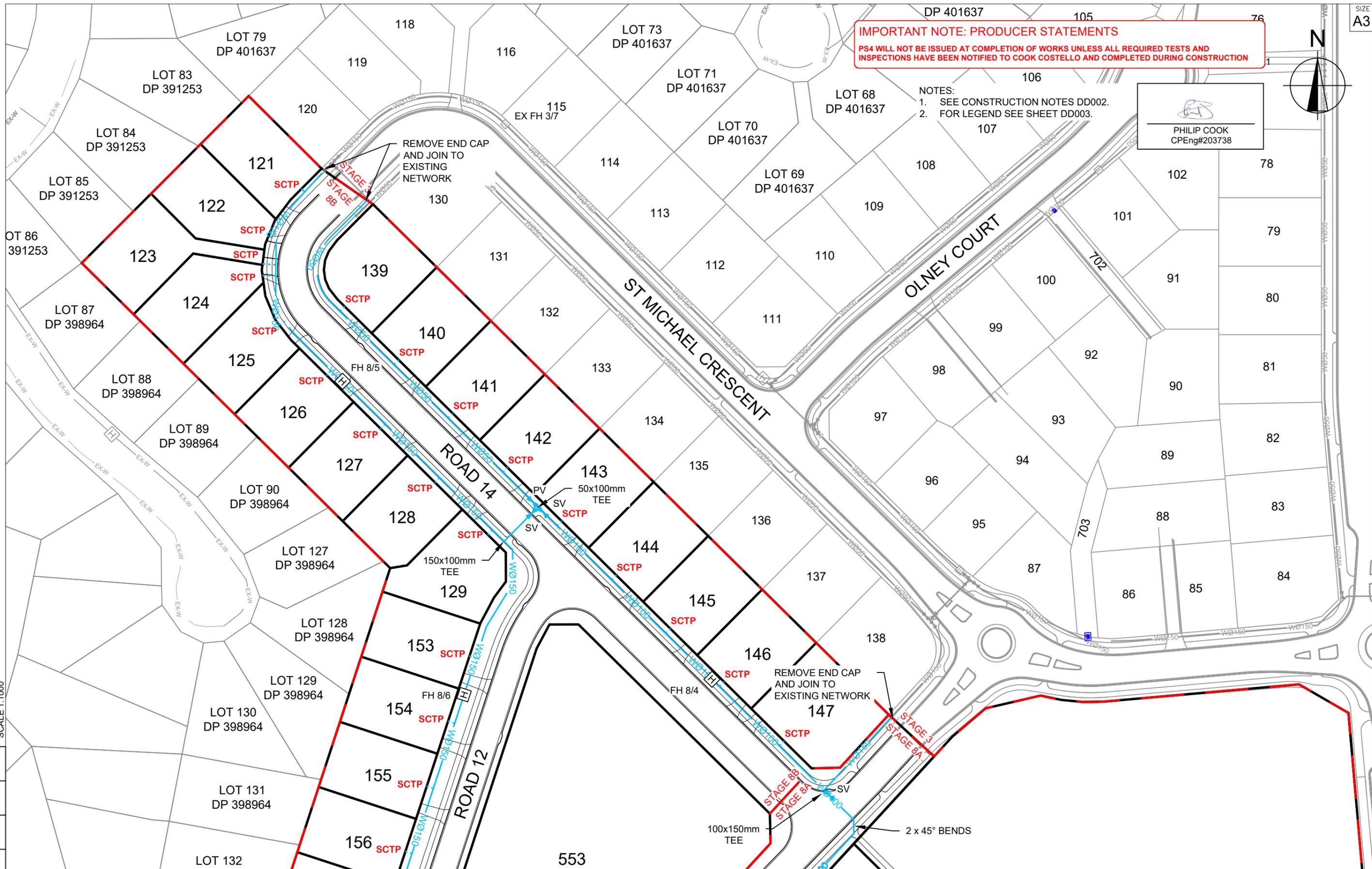
TITLE
 POTABLE WATER PLAN
 OVERVIEW

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:4000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD800	REVISION	B				

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.

PHILIP COOK
CPEng#203738



50 SCALE 1:1000
40
30
20
10
0



C			
B	POTABLE WATER UPDATED	13-12-22	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

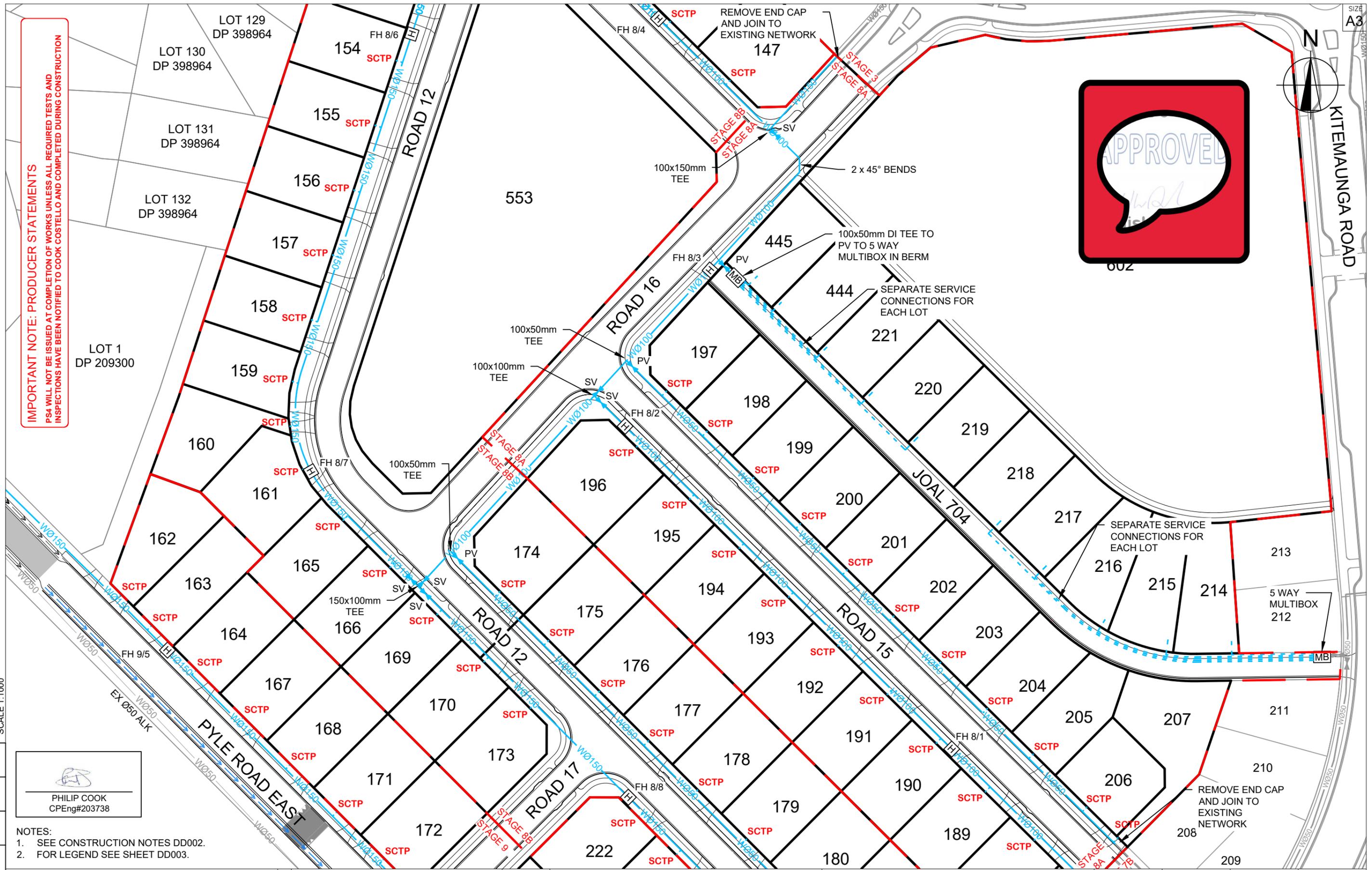
PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER PLAN
SHEET 1

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD801		REVISION	B			

IMPORTANT NOTE: PRODUCER STATEMENTS
 PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SIZE A3



50 SCALE 1:1000
40
30
20
10
0

PHILIP COOK
 CPEng#203738

- NOTES:
 1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.

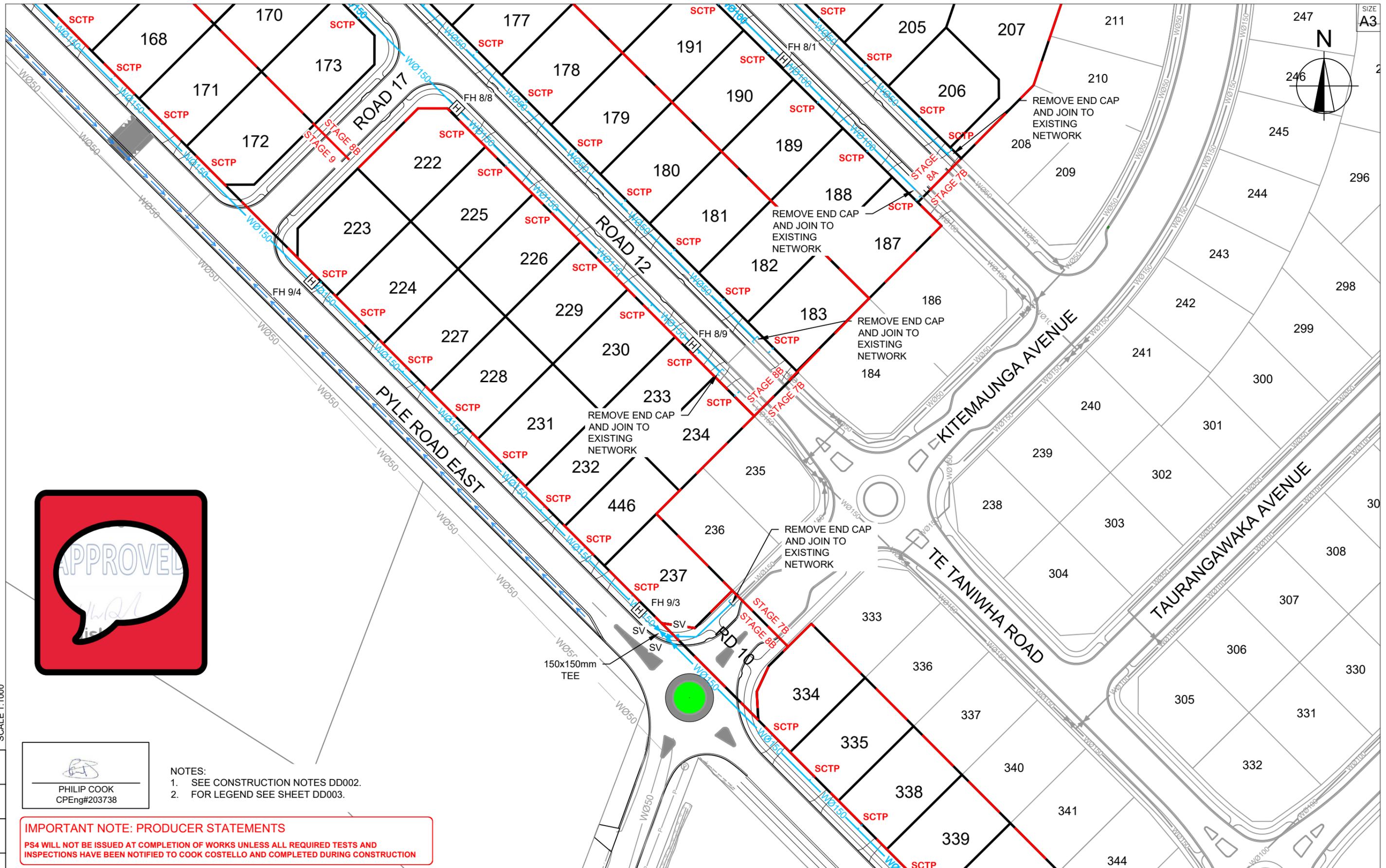


REV.	REVISION DETAILS	DATE	APP.
C			
B	POTABLE WATER UPDATED	13-12-22	
A	1st ISSUE	07-12-22	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER PLAN
SHEET 2

DATE CREATED 07/12/2022	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-009	SCALE 1:1000 @ A3	STATUS FOR APPROVAL	
DWG NUMBER DD802	REVISION B		



PHILIP COOK
CPEng#203738

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

50 SCALE 1:1000
40
30
20
10
0



C			
B	POTABLE WATER UPDATED	13-12-22	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

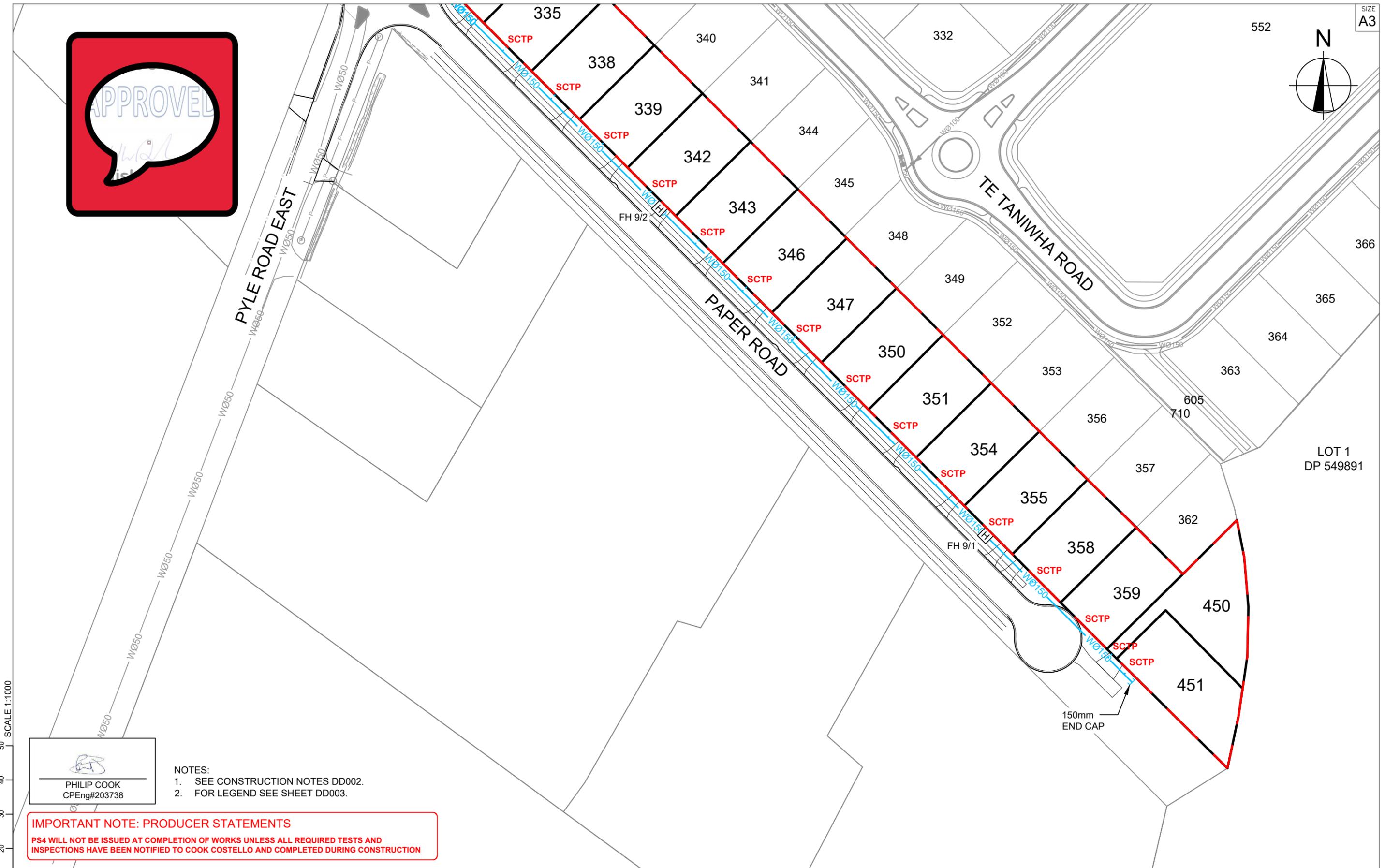
PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

POTABLE WATER PLAN
SHEET 3

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD803		REVISION	B			



SCALE 1:1000

PHILIP COOK
CPEng#203738

- NOTES:
1. SEE CONSTRUCTION NOTES DD002.
 2. FOR LEGEND SEE SHEET DD003.

IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	POTABLE WATER UPDATED	13-12-22	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN	APP.

PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

POTABLE WATER PLAN
SHEET 4

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD804		REVISION	B			

ONE TREE POINT ROAD

LOT 153
DP 391253

LOT 1
DP 327945

LOT 127
DP 398964

150x100mm
TEE
129

LOT 128
DP 398964

153 SCTP

LOT 129
DP 398964

154 SCTP

LOT 130
DP 398964

155 SCTP

LOT 131
DP 398964

156 SCTP

LOT 132
DP 398964

157 SCTP

LOT 1
DP 197696

158 SCTP

LOT 1
DP 209300

159 SCTP

160

161

162

163

165

164

166

167

169

168

170

174

175

196

553

ROAD 12

STAGE 8A
STAGE 8B

ROAD 12



PHILIP COOK
CPEng#203738

- NOTES:
- SEE CONSTRUCTION NOTES DD002.
 - FOR LEGEND SEE SHEET DD003.

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



C			
B	POTABLE WATER UPDATED	13-12-22	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE
POTABLE WATER PLAN
SHEET 5

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	1:1000 @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD805			REVISION	B		

50 SCALE 1:1000
40
30
20
10
0

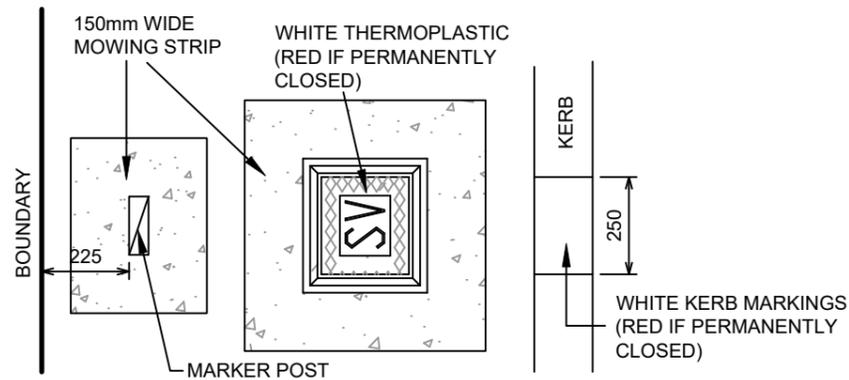
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IMPORTANT NOTE: PRODUCER STATEMENTS

PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

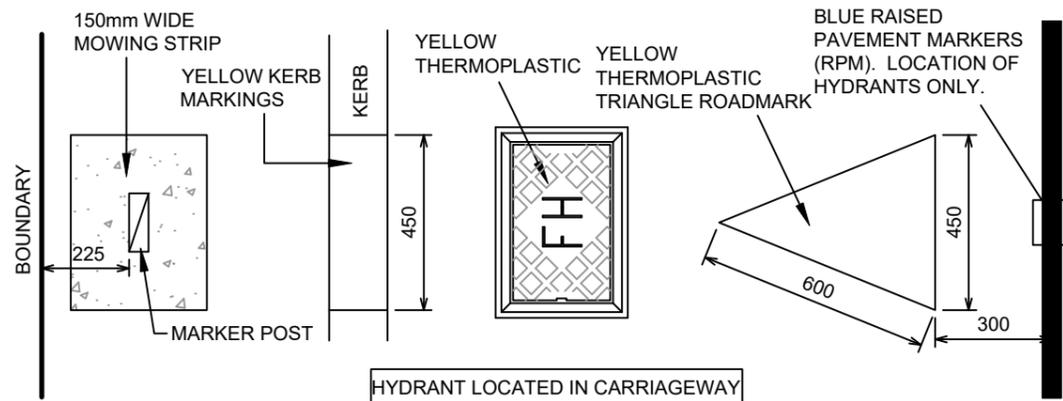
NOTE:
SEE CONSTRUCTION NOTES DD002


PHILIP COOK
WDC IQP#014



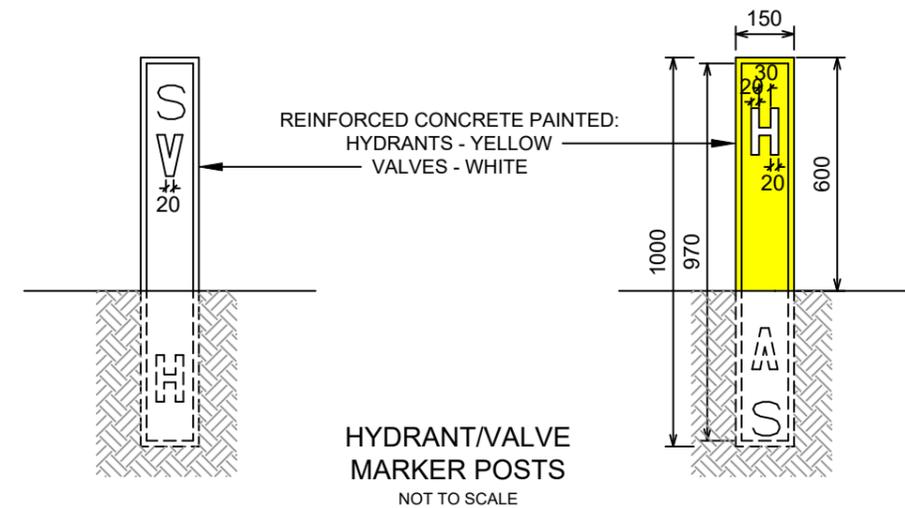
VALVE MARKING

SHEET 48 WDC EES 2010 - NOT TO SCALE

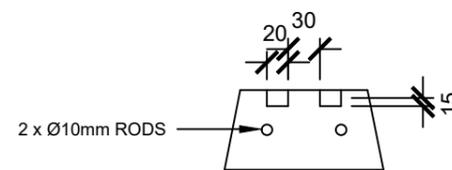


HYDRANT MARKINGS

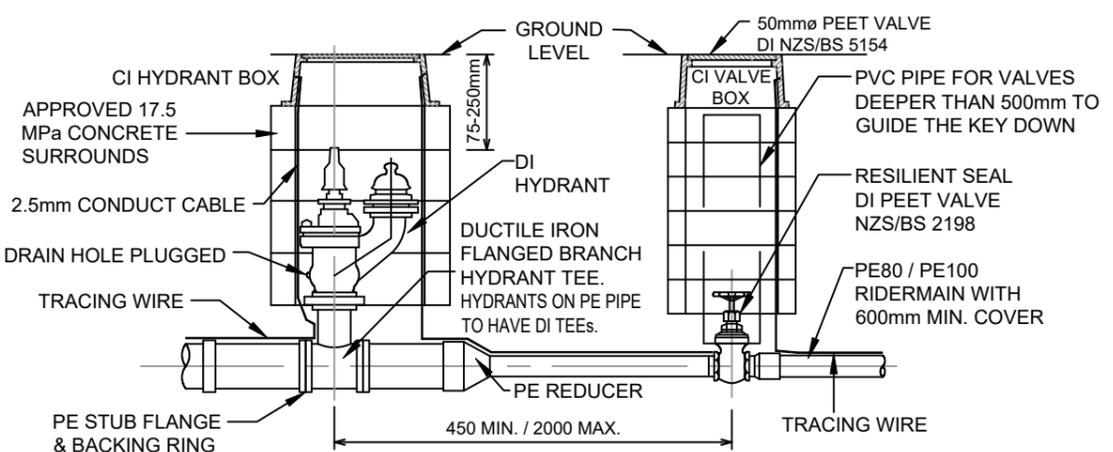
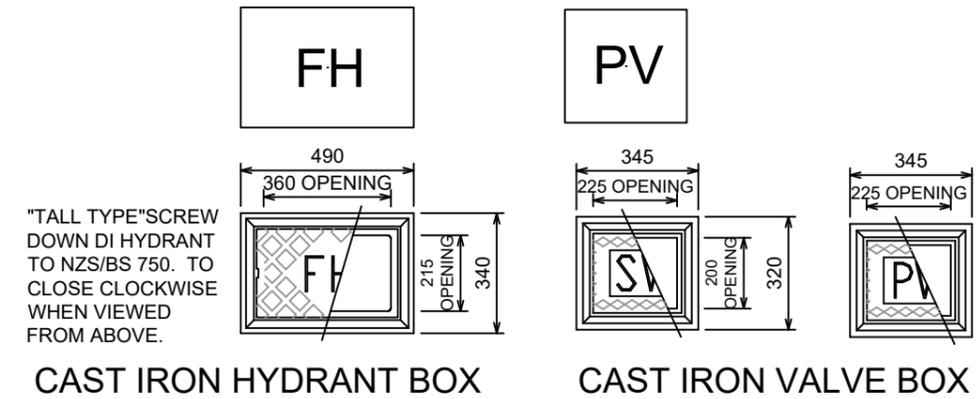
SHEET 48 WDC EES 2010 - NOT TO SCALE



**HYDRANT/VALVE
MARKER POSTS**
NOT TO SCALE



CROSS SECTION
NOT TO SCALE



ELEVATION

- NOTES
- DEFLECTION OF JOINTS IS NOT TO EXCEED THE MANUFACTURER'S RECOMMENDATION.
 - WHERE THERE ARE MORE THAN 15 CONNECTIONS FROM A RIDER MAIN, AN ISOLATING PEET VALVE SHOULD BE PROVIDED IN THE MIDDLE OF THE RIDER MAIN.
 - ALL UNDERGROUND BOLTS TO BE STAINLESS STEEL AND WRAPPED WITH DENSO TAPE, MASTIC AND POLYTAPE.
 - SERVICE CONNECTIONS TO TERMINATE JUST OUTSIDE FRONT BOUNDARY WITH AN APPROVED MANIFOLD, METER BOX (INCLUDING BASE) AND DIAPHRAGM VALVE INCLUDING DUAL CHECK VALVE.
 - DIMENSIONS TO BE SUPPLIED WITH AS-BUILTS.

FH & VALVE INSTALLATION DETAILS

SHEET 45 WDC EES 2010 - NOT TO SCALE



C			
B	POTABLE WATER UPDATED	13-12-22	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS		DRAWN APP.

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8A, 8B & 9
 ONE TREE POINT
 RUAKAKA

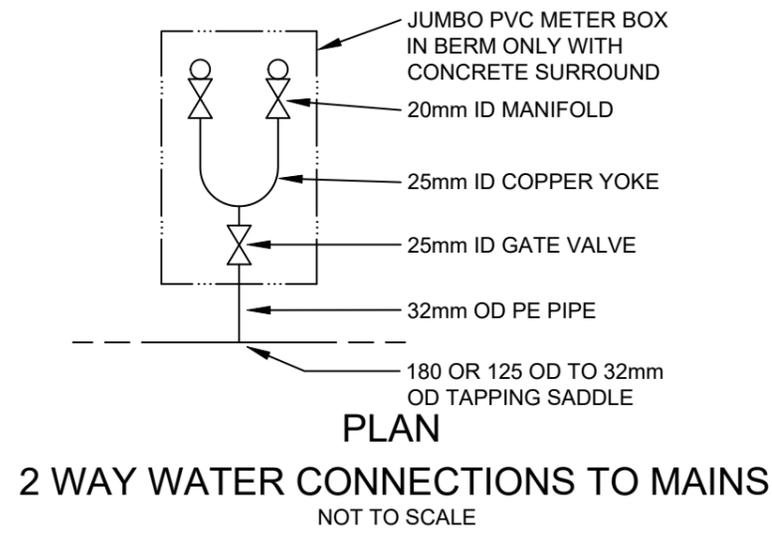
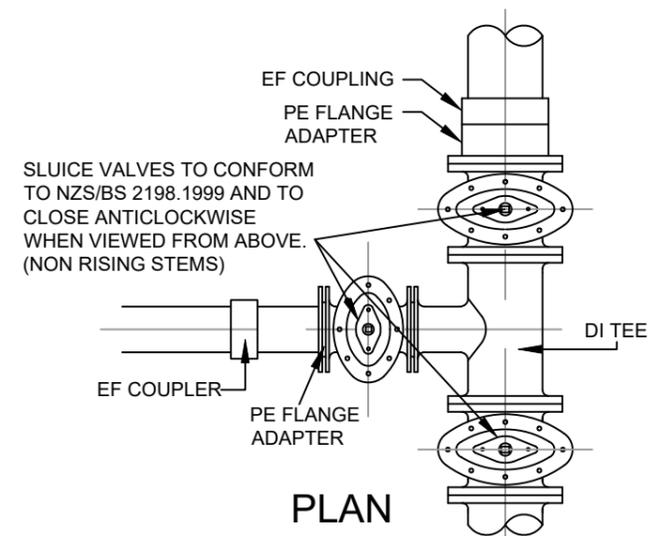
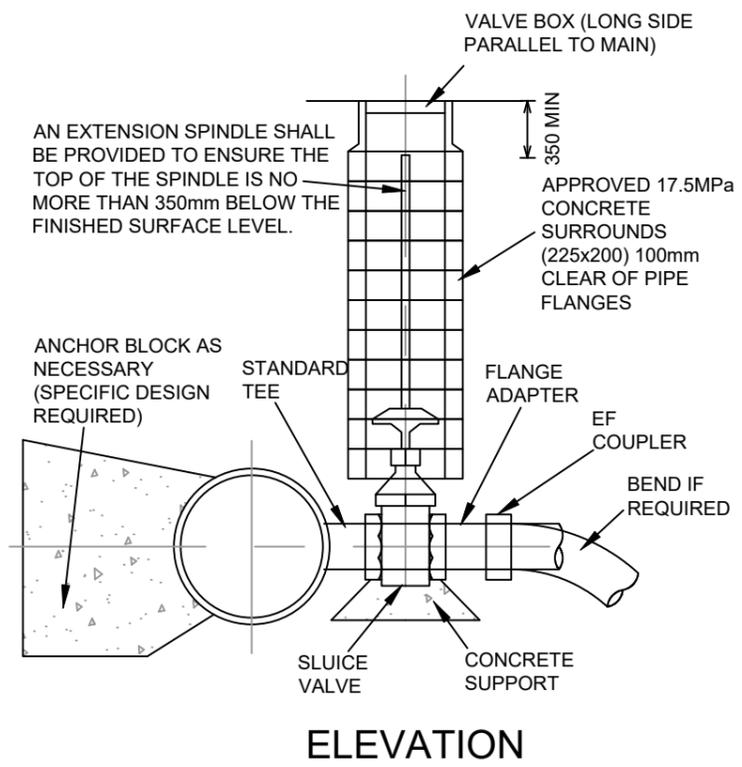
TITLE
POTABLE WATER TYPICAL DETAILS
 SHEET 1

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	NTS @ A3	STATUS	FOR APPROVAL		
DWG NUMBER	DD820	REVISION	B				

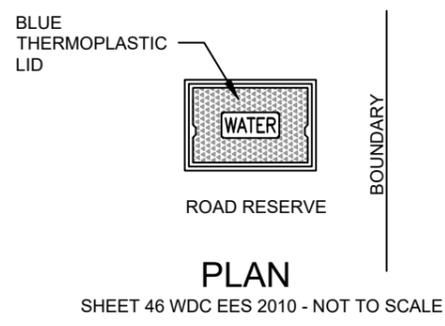
NOTE:
SEE CONSTRUCTION NOTES DD002

PHILIP COOK
WDC IQP#014

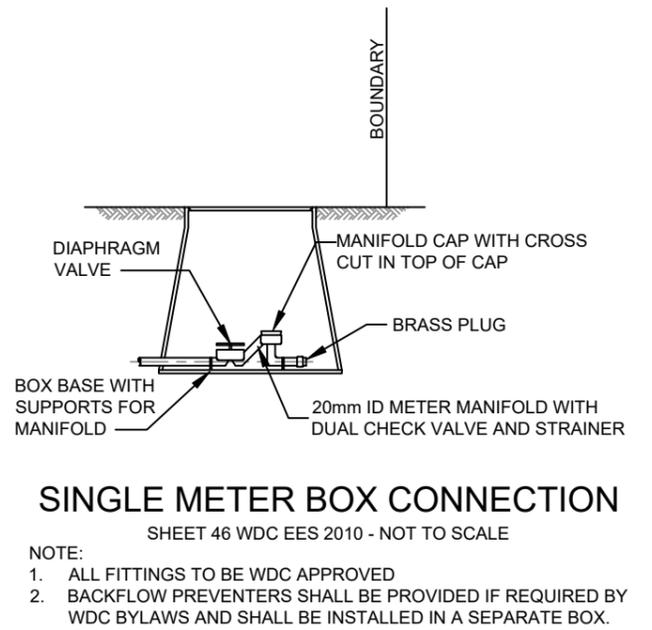
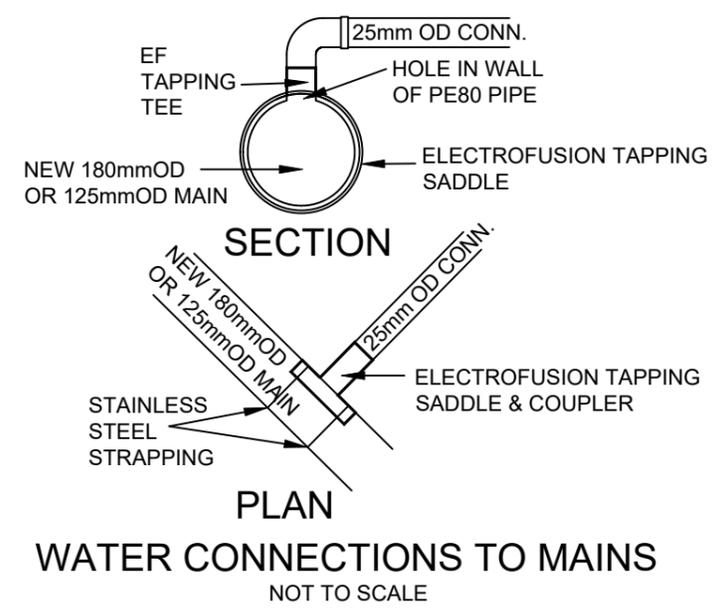
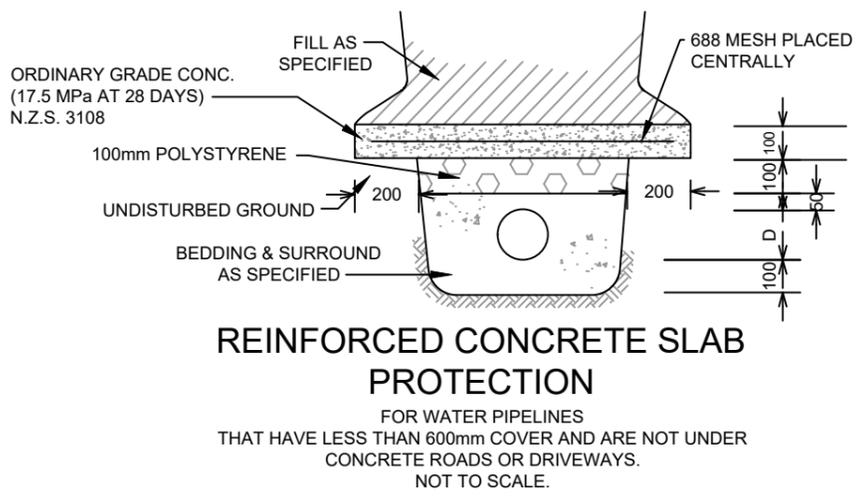
IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION



VALVE INSTALLATION DETAILS
SHEET 49 WDC EES 2022 - NOT TO SCALE



- GENERAL:
- WEAK MIX CONCRETE:
1 PART CEMENT TO 6 PARTS AGGREGATE.
 - CEMENT STABILISED BEDDING AND BACK FILL:
1 PART CEMENT TO 20 PARTS AGGREGATE.
 - ALLOW 48 HOURS CURING PRIOR TO BACK FILLING ANY CONCRETE OR STABILISED MATERIAL.



C			
B	BACKFLOW PREVENTER DIAG REMOVED	13-12-22	KH PC
A	1st ISSUE	07-12-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8A, 8B & 9
ONE TREE POINT
RUAKAKA

TITLE

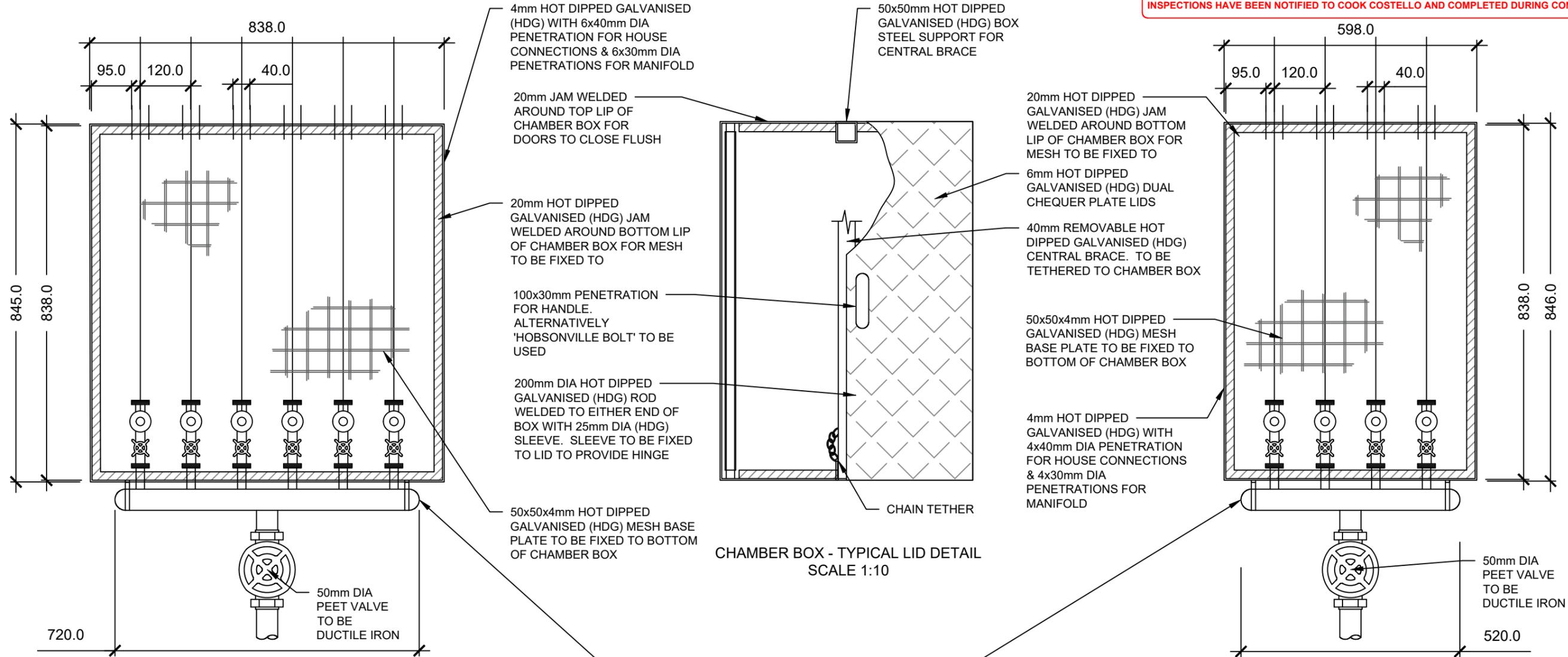
POTABLE WATER TYPICAL DETAILS
SHEET 2

DATE CREATED	07/12/2022	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-009	SCALE	NTS @ A4		STATUS FOR APPROVAL		
DWG NUMBER	DD821				REVISION B		

NOTE:
SEE CONSTRUCTION NOTES DD002

IMPORTANT NOTE: PRODUCER STATEMENTS
PS4 WILL NOT BE ISSUED AT COMPLETION OF WORKS UNLESS ALL REQUIRED TESTS AND INSPECTIONS HAVE BEEN NOTIFIED TO COOK COSTELLO AND COMPLETED DURING CONSTRUCTION

SIZE
A3



CHAMBER BOX - TYPICAL LID DETAIL
SCALE 1:10

6 WAY MANIFOLD - TYPICAL PLAN
SCALE 1:10

4 WAY MANIFOLD - TYPICAL PLAN
SCALE 1:10

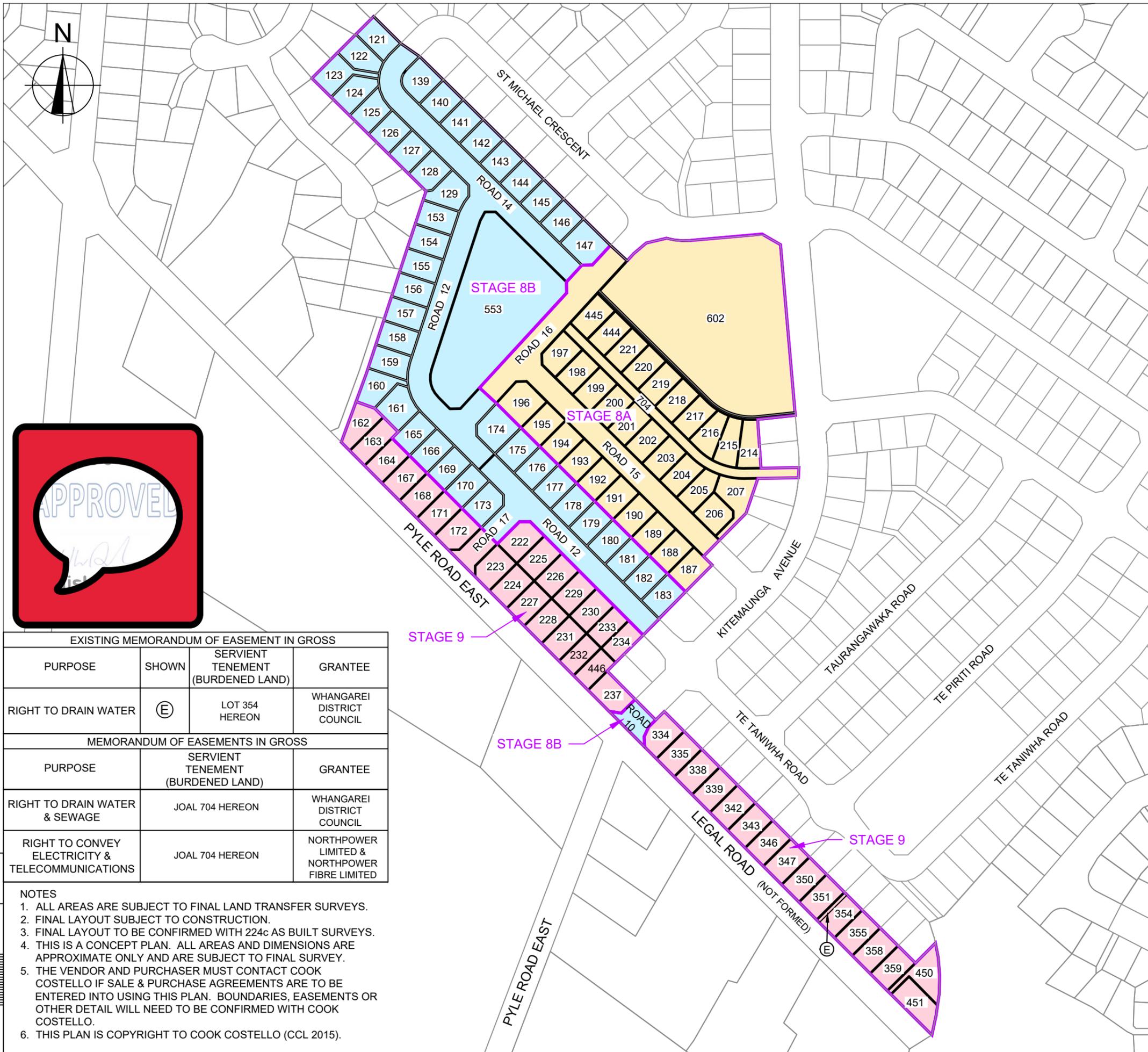
6 WAY MANIFOLD - TYPICAL FRONT ELEVATION
SCALE 1:10

4 WAY MANIFOLD - TYPICAL FRONT ELEVATION
SCALE 1:10

4/6 WAY MANIFOLD CHAMBER BOX

PHILIP COOK
WDC IQP#014

 cook costello www.coco.co.nz Whangarei Auckland Wellington Christchurch	C		PROJECT DETAILS	TITLE	DATE CREATED	DRAWN	DESIGNED	APPROVED	
	B	POTABLE WATER UPDATED	13-12-22 KH PC	WFH PROPERTIES LIMITED THE LANDING - STAGES 8A, 8B & 9 ONE TREE POINT RUAKAKA	POTABLE WATER TYPICAL DETAILS SHEET 3	07/12/2022	K HANSARD	R BROOKES	P COOK
	A	1st ISSUE	07-12-22 KH PC			CCL REF NO 14333-009	SCALE NTS @ A5	STATUS FOR APPROVAL	
	REV.	REVISION DETAILS	DRAWN APP.			DWG NUMBER DD822	REVISION B		



- STAGE 8A**
- 31 RESIDENTIAL LOTS (LOTS 187-207, 214-221 & 444-445)
 - RECREATION RESERVE TO VEST ON LOT 602
 - ROADS TO VEST (ROADS 15 & 16)
 - JOAL 704
- STAGE 8B**
- 42 RESIDENTIAL LOTS (LOTS 121-129, 139-147, 153-161, 165-166, 169-170 & 173-183)
 - LOCAL PUROSE RESERVE (DRAINAGE) TO VEST ON LOT 553
 - ROADS TO VEST (ROADS 10, 12, 14 & 17)
- STAGE 9**
- 38 RESIDENTIAL LOTS (162-164, 167-168, 171-172, 222-234, 237, 334-335, 338-339, 342-343, 346-347, 350-351, 354-355, 358-359, 446 & 450-451)
 - ROADS TO VEST (ROAD 17)

AMALGAMATION CONDITION
 THAT LOT 704 HEREON (LEGAL ACCESS) BE HELD AS TO TEN UNDIVIDED ONE-TENTH SHARES BY THE OWNERS OF LOTS 214, 215, 216, 217, 218, 219, 220, 221, 444 AND 445 HEREON AS TENANTS IN COMMON IN THE SAID SHARES AND THAT INDIVIDUAL COMPUTER REGISTERS BE ISSUED IN ACCORDANCE THEREWITH.



EXISTING MEMORANDUM OF EASEMENT IN GROSS			
PURPOSE	SHOWN	SERVIENT TENEMENT (BURDENED LAND)	GRANTEE
RIGHT TO DRAIN WATER	Ⓔ	LOT 354 HEREON	WHANGAREI DISTRICT COUNCIL

MEMORANDUM OF EASEMENTS IN GROSS		
PURPOSE	SERVIENT TENEMENT (BURDENED LAND)	GRANTEE
RIGHT TO DRAIN WATER & SEWAGE	JOAL 704 HEREON	WHANGAREI DISTRICT COUNCIL
RIGHT TO CONVEY ELECTRICITY & TELECOMMUNICATIONS	JOAL 704 HEREON	NORTHPOWER LIMITED & NORTHPOWER FIBRE LIMITED

NOTES

1. ALL AREAS ARE SUBJECT TO FINAL LAND TRANSFER SURVEYS.
2. FINAL LAYOUT SUBJECT TO CONSTRUCTION.
3. FINAL LAYOUT TO BE CONFIRMED WITH 224c AS BUILT SURVEYS.
4. THIS IS A CONCEPT PLAN. ALL AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FINAL SURVEY.
5. THE VENDOR AND PURCHASER MUST CONTACT COOK COSTELLO IF SALE & PURCHASE AGREEMENTS ARE TO BE ENTERED INTO USING THIS PLAN. BOUNDARIES, EASEMENTS OR OTHER DETAIL WILL NEED TO BE CONFIRMED WITH COOK COSTELLO.
6. THIS PLAN IS COPYRIGHT TO COOK COSTELLO (CCL 2015).

E	STAGE 8A & 8B BDY CHANGE	31-01-23
		KH PC
D	STAGE CHANGES	12-10-22
		KH PC
C	LOT 360 SPLIT INTO TWO LOTS	29-03-22
		KH PC
REV.	REVISION DETAILS	DRAWN APP.

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PROJECT DETAILS

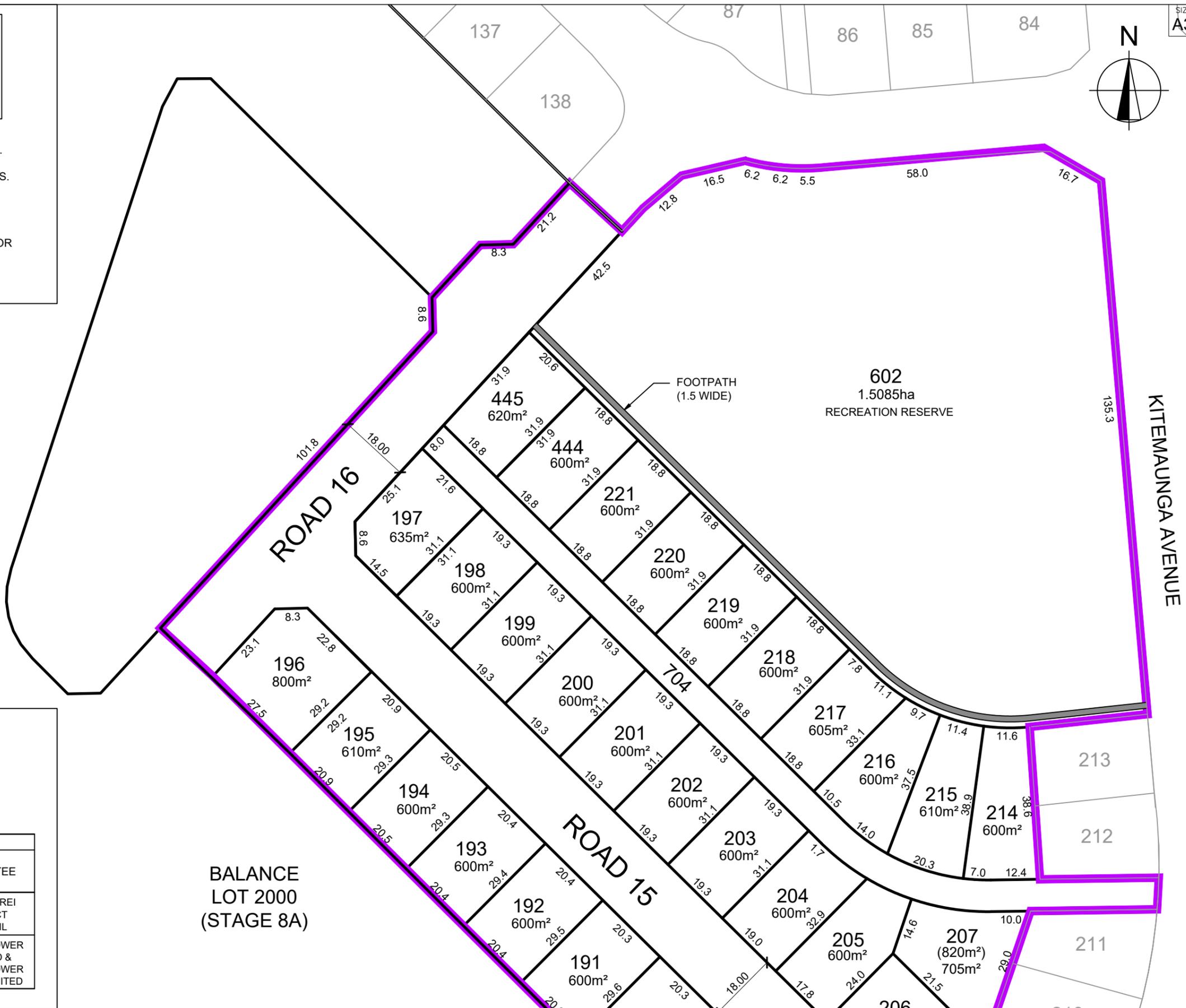
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8 & 9
 ONE TREE POINT
 RUAKAKA

TITLE		
SCHEME PLAN - STAGES 8A, 8B & 9 PROPOSED SUBDIVISION OF LOT 2000 (STAGE 7B) SHEET 1 OF 8		
DATE CREATED	CCL REF NO	
15/09/2021	14333-008	
DRAWN	DESIGNED	APPROVED
K HANSARD	R BROOKES	P COOK
SCALE	STATUS	
1:3000 @ A3	FOR CONSENT	
DWG NUMBER	REVISION	
SCH01	E	

AMALGAMATION CONDITION
 THAT LOT 704 HEREON (LEGAL ACCESS) BE HELD AS TO TEN
 UNDIVIDED ONE-TENTH SHARES BY THE OWNERS OF LOTS 214,
 215, 216, 217, 218, 219, 220, 221, 444 AND 445 HEREON AS
 TENANTS IN COMMON IN THE SAID SHARES AND THAT
 INDIVIDUAL COMPUTER REGISTERS BE ISSUED IN ACCORDANCE
 THEREWITH.

NOTES

1. ALL AREAS ARE SUBJECT TO FINAL LAND TRANSFER SURVEYS.
2. FINAL LAYOUT SUBJECT TO CONSTRUCTION.
3. FINAL LAYOUT TO BE CONFIRMED WITH 224c AS BUILT SURVEYS.
4. THIS IS A CONCEPT PLAN. ALL AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FINAL SURVEY.
5. THE VENDOR AND PURCHASER MUST CONTACT COOK COSTELLO IF SALE & PURCHASE AGREEMENTS ARE TO BE ENTERED INTO USING THIS PLAN. BOUNDARIES, EASEMENTS OR OTHER DETAIL WILL NEED TO BE CONFIRMED WITH COOK COSTELLO.
6. THIS PLAN IS COPYRIGHT TO COOK COSTELLO (CCL 2015).



BALANCE
 LOT 2000
 (STAGE 8A)

- STAGE 8A
- 31 RESIDENTIAL LOTS (LOTS 187-207, 214-221 & 444-445)
 - RECREATION RESERVE TO VEST ON LOT 602
 - ROADS TO VEST (ROADS 15 & 16)
 - JOAL 704

MEMORANDUM OF EASEMENTS IN GROSS		
PURPOSE	SERVIENT TENEMENT (BURDENED LAND)	GRANTEE
RIGHT TO DRAIN WATER & SEWAGE	JOAL 704 HEREON	WHANGAREI DISTRICT COUNCIL
RIGHT TO CONVEY ELECTRICITY & TELECOMMUNICATIONS	JOAL 704 HEREON	NORTHPOWER LIMITED & NORTHPOWER FIBRE LIMITED



REV.	REVISION DETAILS	DATE	BY	APP.
E	STAGE 8A & 8B BDY CHANGE	31-01-23	KH PC	
D	STAGE CHANGES	12-10-22	KH PC	
C	LOT 360 SPLIT INTO TWO LOTS	29-03-22	KH PC	

PROJECT DETAILS
 WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8 & 9
 ONE TREE POINT
 RUAKAKA

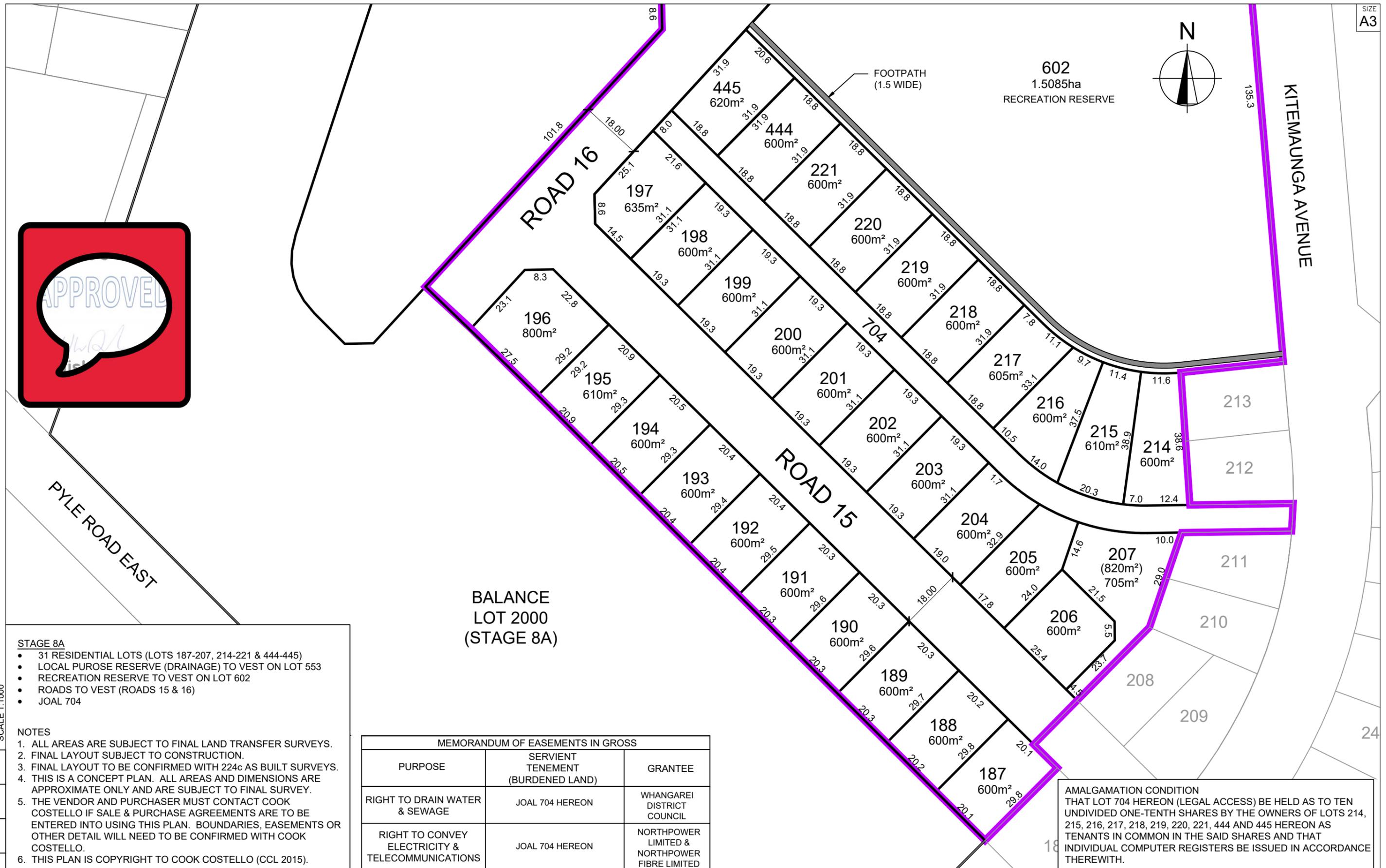
TITLE
 SCHEME PLAN - STAGE 8A
 PROPOSED SUBDIVISION OF
 LOT 2000 (STAGE 7B)
 SHEET 2 OF 8

DATE CREATED 15/09/2021	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-008	SCALE 1:1000 @ A3	STATUS FOR CONSENT	
DWG NUMBER SCH02	REVISION E		

50 SCALE 1:1000

40
30
20
10
0

0 10 20 30 40 50 SCALE 1:1000



STAGE 8A

- 31 RESIDENTIAL LOTS (LOTS 187-207, 214-221 & 444-445)
- LOCAL PUROSE RESERVE (DRAINAGE) TO VEST ON LOT 553
- RECREATION RESERVE TO VEST ON LOT 602
- ROADS TO VEST (ROADS 15 & 16)
- JOAL 704

NOTES

1. ALL AREAS ARE SUBJECT TO FINAL LAND TRANSFER SURVEYS.
2. FINAL LAYOUT SUBJECT TO CONSTRUCTION.
3. FINAL LAYOUT TO BE CONFIRMED WITH 224c AS BUILT SURVEYS.
4. THIS IS A CONCEPT PLAN. ALL AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FINAL SURVEY.
5. THE VENDOR AND PURCHASER MUST CONTACT COOK COSTELLO IF SALE & PURCHASE AGREEMENTS ARE TO BE ENTERED INTO USING THIS PLAN. BOUNDARIES, EASEMENTS OR OTHER DETAIL WILL NEED TO BE CONFIRMED WITH COOK COSTELLO.
6. THIS PLAN IS COPYRIGHT TO COOK COSTELLO (CCL 2015).

BALANCE
LOT 2000
(STAGE 8A)

MEMORANDUM OF EASEMENTS IN GROSS		
PURPOSE	SERVIENT TENEMENT (BURDENED LAND)	GRANTEE
RIGHT TO DRAIN WATER & SEWAGE	JOAL 704 HEREON	WHANGAREI DISTRICT COUNCIL
RIGHT TO CONVEY ELECTRICITY & TELECOMMUNICATIONS	JOAL 704 HEREON	NORTHPOWER LIMITED & NORTHPOWER FIBRE LIMITED

AMALGAMATION CONDITION
THAT LOT 704 HEREON (LEGAL ACCESS) BE HELD AS TO TEN UNDIVIDED ONE-TENTH SHARES BY THE OWNERS OF LOTS 214, 215, 216, 217, 218, 219, 220, 221, 444 AND 445 HEREON AS TENANTS IN COMMON IN THE SAID SHARES AND THAT INDIVIDUAL COMPUTER REGISTERS BE ISSUED IN ACCORDANCE THEREWITH.

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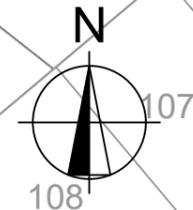
REV.	REVISION DETAILS	DATE	DRAWN	APP.
E	STAGE 8A & 8B BDY CHANGE	31-01-23	KH	PC
D	STAGE CHANGES	12-10-22	KH	PC
C	LOT 360 SPLIT INTO TWO LOTS	29-03-22	KH	PC

PROJECT DETAILS
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8 & 9
ONE TREE POINT
RUAKAKA

TITLE
SCHEME PLAN - STAGE 8A
PROPOSED SUBDIVISION OF
LOT 2000 (STAGE 7B)
SHEET 3 OF 8

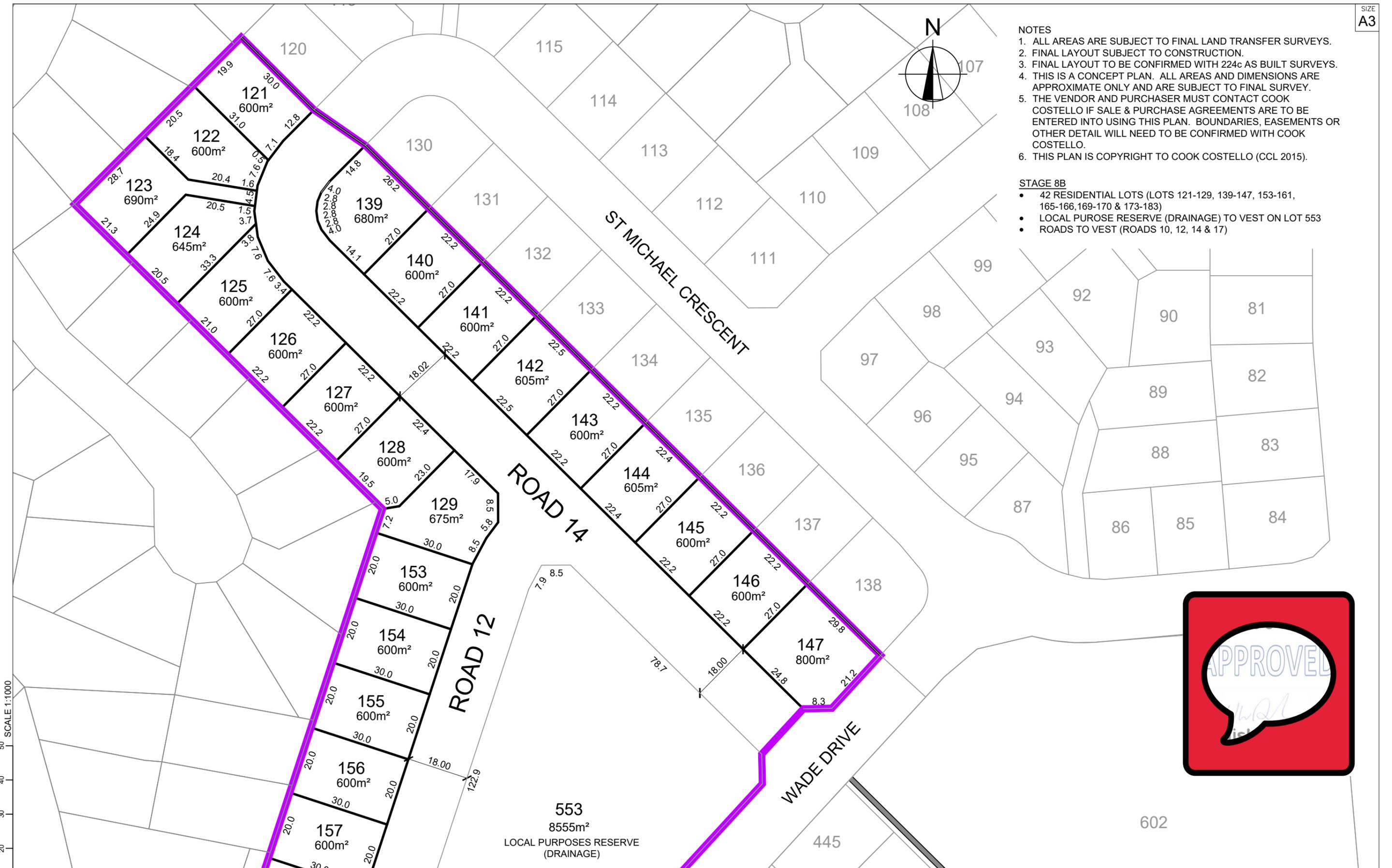
DATE CREATED 15/09/2021	DRAWN K HANSARD	DESIGNED R BROOKES	APPROVED P COOK
CCL REF NO 14333-008	SCALE 1:1000 @ A3	STATUS FOR CONSENT	
DWG NUMBER SCH03	REVISION E		

0 10 20 30 40 50 SCALE 1:1000



- NOTES**
1. ALL AREAS ARE SUBJECT TO FINAL LAND TRANSFER SURVEYS.
 2. FINAL LAYOUT SUBJECT TO CONSTRUCTION.
 3. FINAL LAYOUT TO BE CONFIRMED WITH 224c AS BUILT SURVEYS.
 4. THIS IS A CONCEPT PLAN. ALL AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FINAL SURVEY.
 5. THE VENDOR AND PURCHASER MUST CONTACT COOK COSTELLO IF SALE & PURCHASE AGREEMENTS ARE TO BE ENTERED INTO USING THIS PLAN. BOUNDARIES, EASEMENTS OR OTHER DETAIL WILL NEED TO BE CONFIRMED WITH COOK COSTELLO.
 6. THIS PLAN IS COPYRIGHT TO COOK COSTELLO (CCL 2015).

- STAGE 8B**
- 42 RESIDENTIAL LOTS (LOTS 121-129, 139-147, 153-161, 165-166, 169-170 & 173-183)
 - LOCAL PURPOSE RESERVE (DRAINAGE) TO VEST ON LOT 553
 - ROADS TO VEST (ROADS 10, 12, 14 & 17)



SCALE 1:1000
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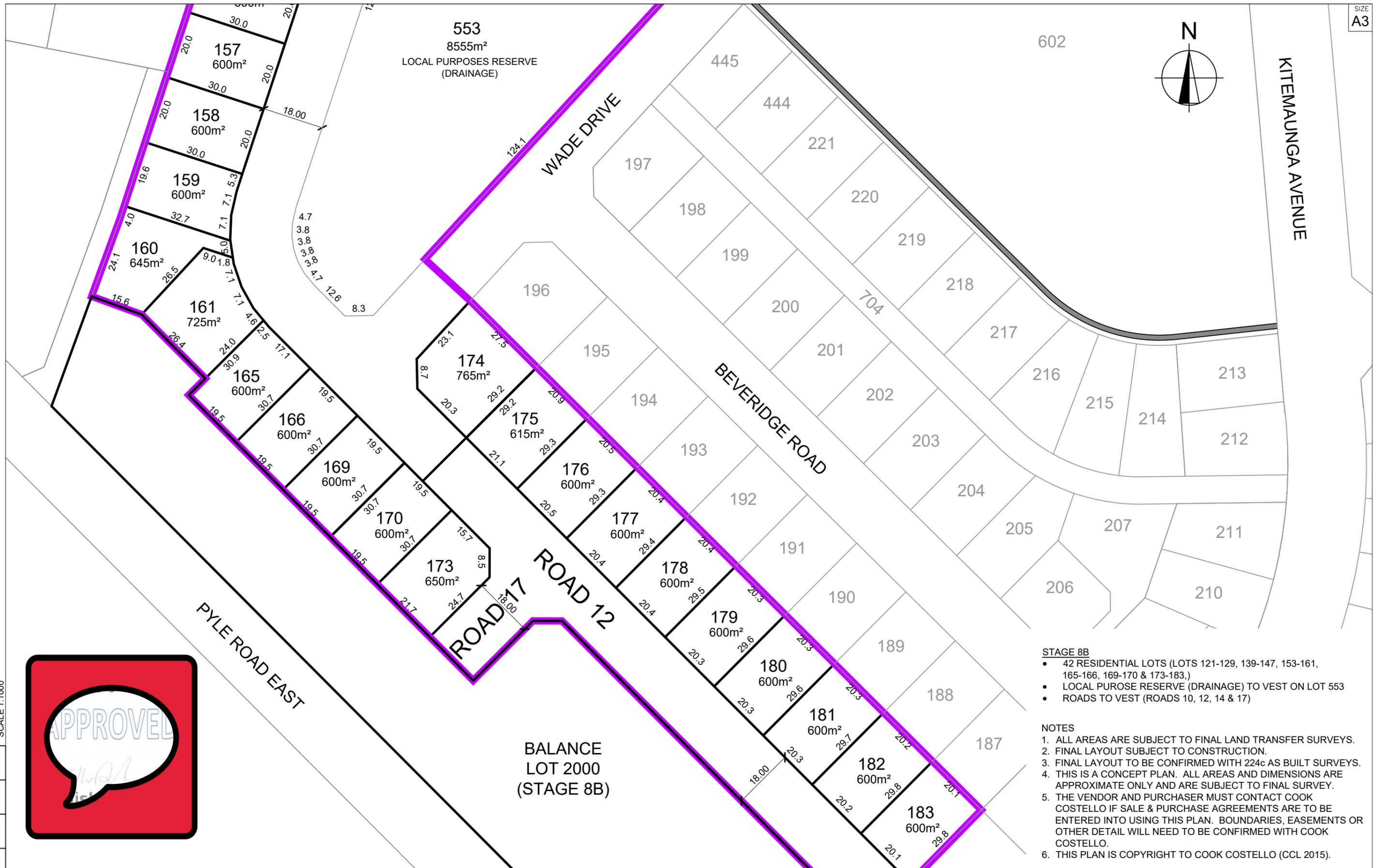
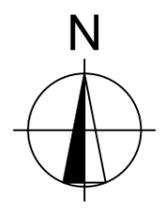


REV.	REVISION DETAILS	DATE	BY	APP.
E	STAGE 8A & 8B BDY CHANGE	31-01-23	KH	PC
D	STAGE CHANGES	12-10-22	KH	PC
C	LOT 360 SPLIT INTO TWO LOTS	29-03-22	KH	PC

PROJECT DETAILS	
CLIENT	WFH PROPERTIES LIMITED
PROJECT	THE LANDING - STAGES 8 & 9
LOCATION	ONE TREE POINT RUAKAKA

TITLE	
SCHEME PLAN - STAGE 8B	
PROPOSED SUBDIVISION OF	
LOT 2000 (STAGE 8A)	
SHEET 3 OF 8	

DATE CREATED	15/09/2021	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-008	SCALE	1:1000 @ A3	STATUS		FOR CONSENT	
DWG NUMBER	SCH04	REVISION		E			



- STAGE 8B**
- 42 RESIDENTIAL LOTS (LOTS 121-129, 139-147, 153-161, 165-166, 169-170 & 173-183,)
 - LOCAL PUROSE RESERVE (DRAINAGE) TO VEST ON LOT 553
 - ROADS TO VEST (ROADS 10, 12, 14 & 17)

- NOTES**
1. ALL AREAS ARE SUBJECT TO FINAL LAND TRANSFER SURVEYS.
 2. FINAL LAYOUT SUBJECT TO CONSTRUCTION.
 3. FINAL LAYOUT TO BE CONFIRMED WITH 224c AS BUILT SURVEYS.
 4. THIS IS A CONCEPT PLAN. ALL AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FINAL SURVEY.
 5. THE VENDOR AND PURCHASER MUST CONTACT COOK COSTELLO IF SALE & PURCHASE AGREEMENTS ARE TO BE ENTERED INTO USING THIS PLAN. BOUNDARIES, EASEMENTS OR OTHER DETAIL WILL NEED TO BE CONFIRMED WITH COOK COSTELLO.
 6. THIS PLAN IS COPYRIGHT TO COOK COSTELLO (CCL 2015).



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SCALE 1:1000

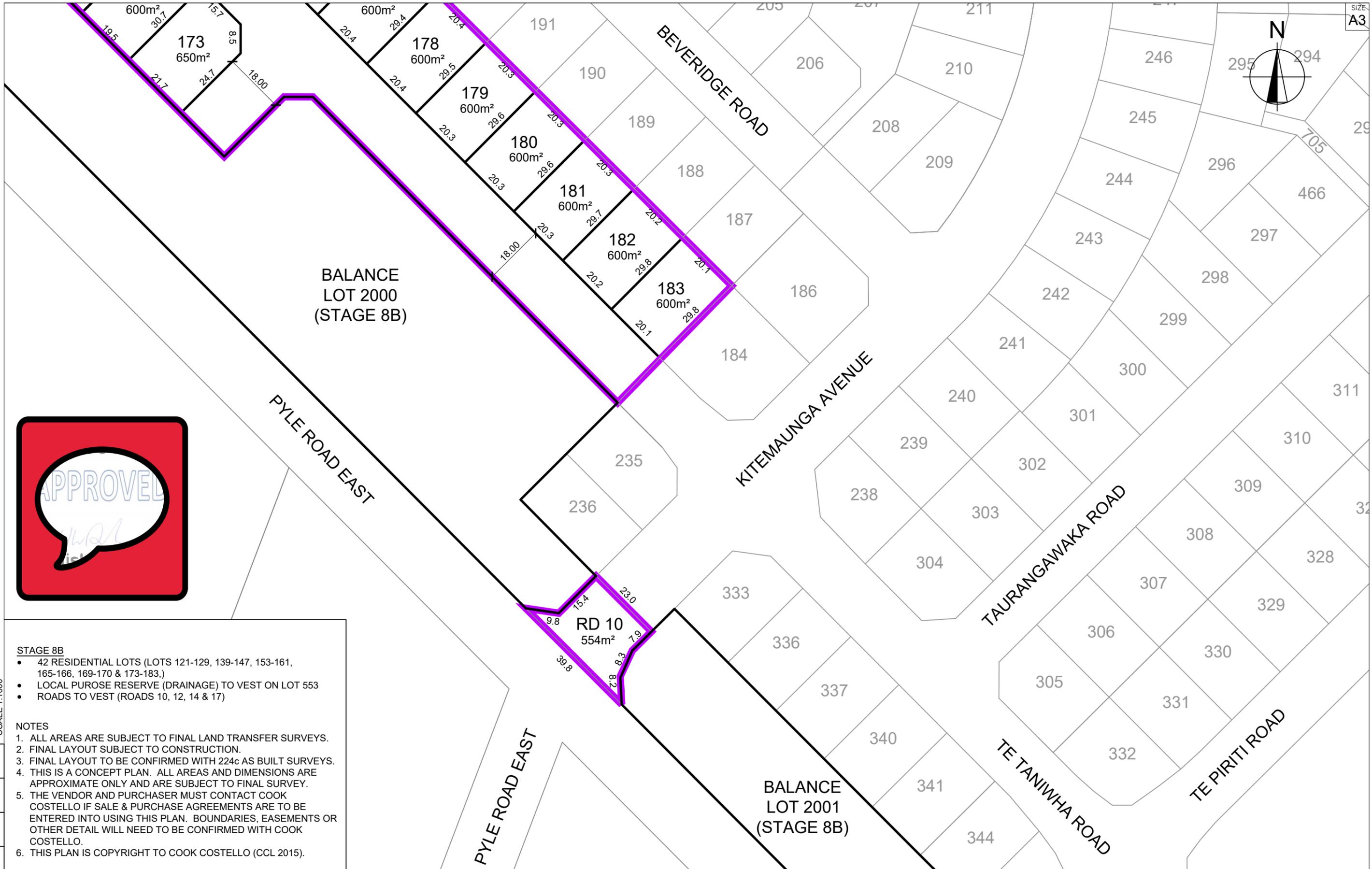


E	STAGE 8A & 8B BDY CHANGE	31-01-23	KH PC
D	STAGE CHANGES	12-10-22	KH PC
C	LOT 360 SPLIT INTO TWO LOTS	29-03-22	KH PC
REV.	REVISION DETAILS	DRAWN APP.	

PROJECT DETAILS
WFH PROPERTIES LIMITED
 THE LANDING - STAGES 8 & 9
 ONE TREE POINT
 RUAKAKA

TITLE
SCHEME PLAN - STAGE 8B
 PROPOSED SUBDIVISION OF
 LOT 2000 (STAGE 8A)
 SHEET 3 OF 8

DATE CREATED	15/09/2021	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-008	SCALE	1:1000 @ A3	STATUS	FOR CONSENT		
DWG NUMBER	SCH05		REVISION	E			



BALANCE
LOT 2000
(STAGE 8B)

BALANCE
LOT 2001
(STAGE 8B)

RD 10
554m²

STAGE 8B

- 42 RESIDENTIAL LOTS (LOTS 121-129, 139-147, 153-161, 165-166, 169-170 & 173-183.)
- LOCAL PUROSE RESERVE (DRAINAGE) TO VEST ON LOT 553
- ROADS TO VEST (ROADS 10, 12, 14 & 17)

NOTES

- ALL AREAS ARE SUBJECT TO FINAL LAND TRANSFER SURVEYS.
- FINAL LAYOUT SUBJECT TO CONSTRUCTION.
- FINAL LAYOUT TO BE CONFIRMED WITH 224c AS BUILT SURVEYS.
- THIS IS A CONCEPT PLAN. ALL AREAS AND DIMENSIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FINAL SURVEY.
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E	STAGE 8A & 8B BDY CHANGE	31-01-23	KH PC
D	STAGE CHANGES	12-10-22	KH PC
C	LOT 360 SPLIT INTO TWO LOTS	29-03-22	KH PC
REV.	REVISION DETAILS		DRAWN APP.

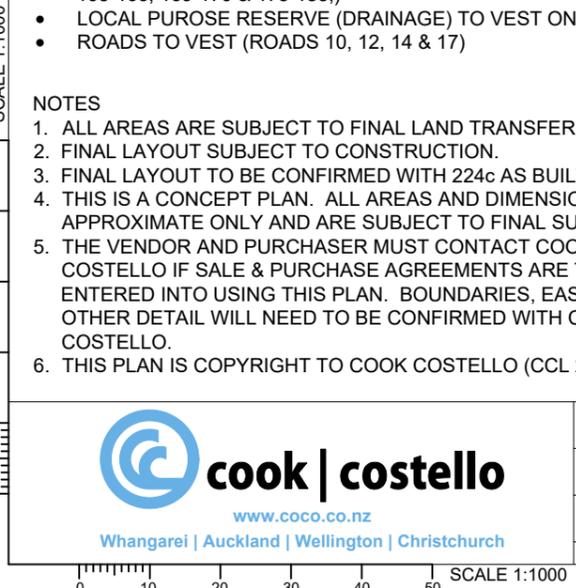
PROJECT DETAILS

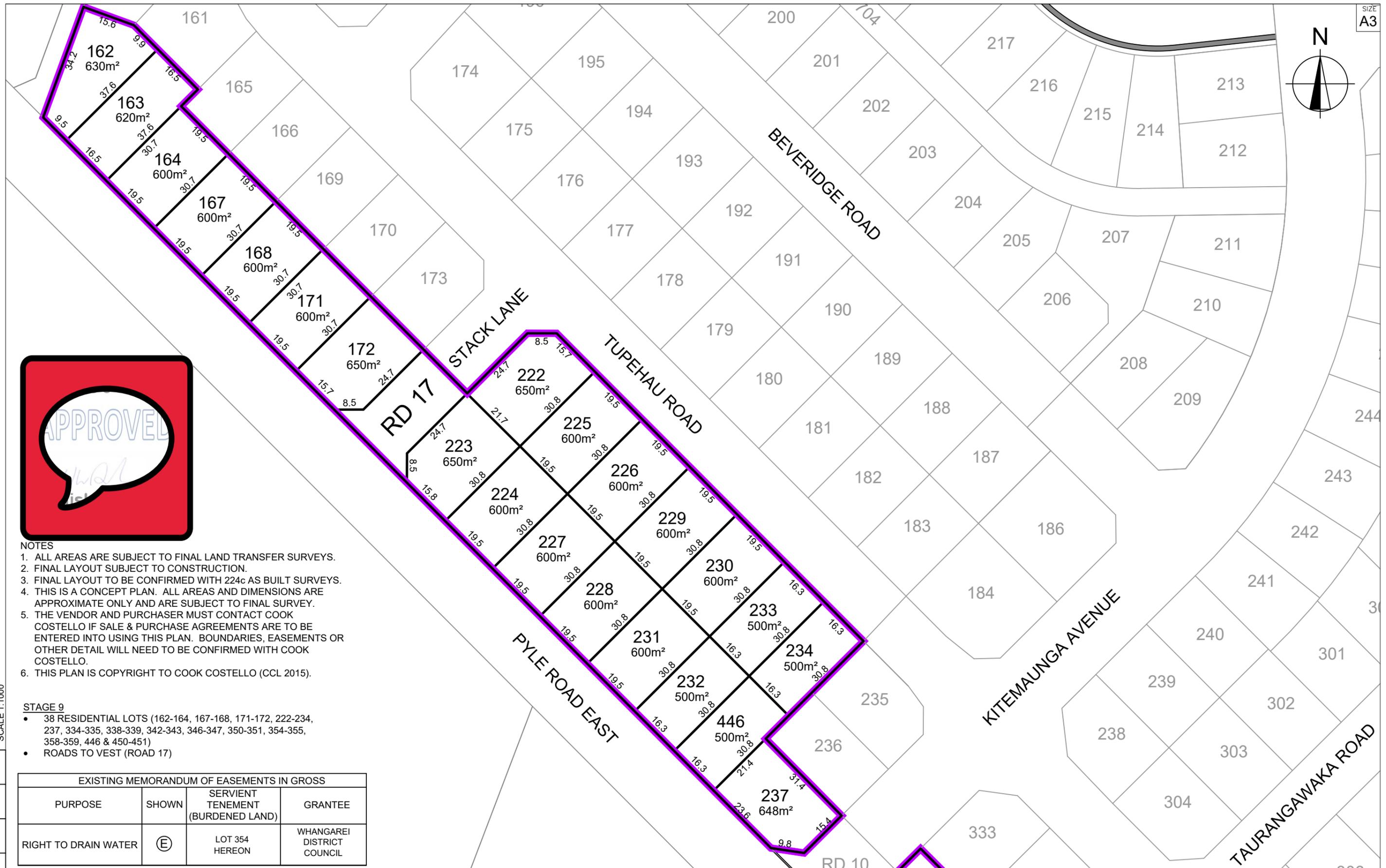
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8 & 9
ONE TREE POINT
RUAKAKA

TITLE

SCHEME PLAN - STAGE 8B
PROPOSED SUBDIVISION OF
LOT 2000 (STAGE 8A)
SHEET 6 OF 8

DATE CREATED	15/09/2021	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-008	SCALE	1:1000 @ A3	STATUS	FOR CONSENT		
DWG NUMBER	SCH06		REVISION	E			





- NOTES**
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 2. FINAL LAYOUT SUBJECT TO CONSTRUCTION.
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 6. THIS PLAN IS COPYRIGHT TO COOK COSTELLO (CCL 2015).

- STAGE 9**
- 38 RESIDENTIAL LOTS (162-164, 167-168, 171-172, 222-234, 237, 334-335, 338-339, 342-343, 346-347, 350-351, 354-355, 358-359, 446 & 450-451)
 - ROADS TO VEST (ROAD 17)

EXISTING MEMORANDUM OF EASEMENTS IN GROSS			
PURPOSE	SHOWN	SERVIENT TENEMENT (BURDENED LAND)	GRANTEE
RIGHT TO DRAIN WATER	Ⓔ	LOT 354 HEREON	WHANGAREI DISTRICT COUNCIL

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Whangarei | Auckland | Wellington | Christchurch

REV.	REVISION DETAILS	DATE	DRAWN	APP.
E	STAGE 8A & 8B BDY CHANGE	31-01-23		
D	STAGE CHANGES	12-10-22	KH	PC
C	LOT 360 SPLIT INTO TWO LOTS	29-03-22	KH	PC

PROJECT DETAILS

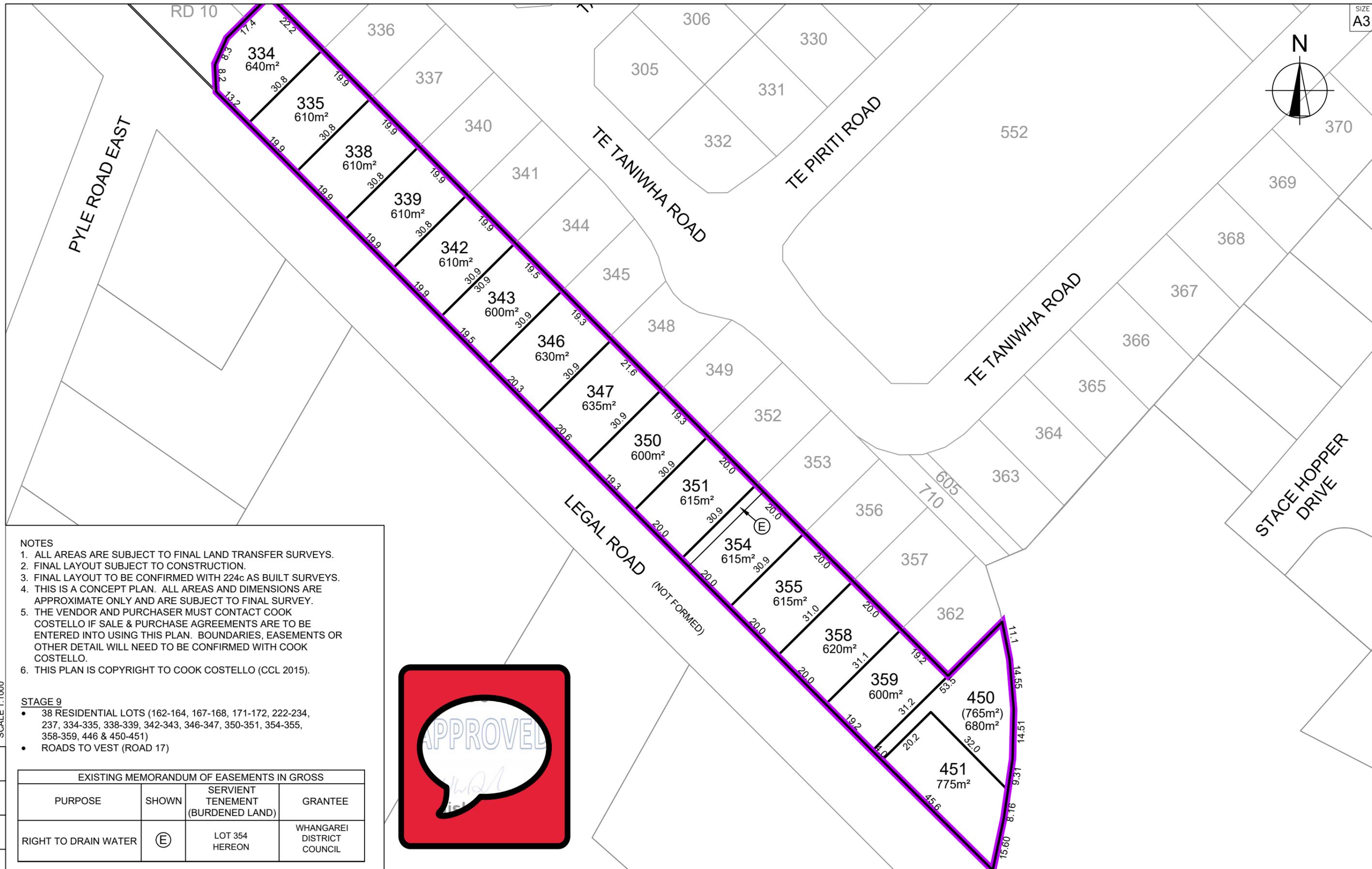
WFH PROPERTIES LIMITED
THE LANDING - STAGES 8 & 9
ONE TREE POINT
RUAKAKA

TITLE

SCHEME PLAN - STAGE 9
PROPOSED SUBDIVISION OF
LOTS 2000 & 2001 (STAGE 8B)
SHEET 7 OF 8

DATE CREATED	15/09/2021	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-008	SCALE	1:1000 @ A3	STATUS	FOR CONSENT		
DWG NUMBER	SCH07		REVISION	E			

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NOTES

1. ALL AREAS ARE SUBJECT TO FINAL LAND TRANSFER SURVEYS.
2. FINAL LAYOUT SUBJECT TO CONSTRUCTION.
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STAGE 9

- 38 RESIDENTIAL LOTS (162-164, 167-168, 171-172, 222-234, 237, 334-335, 338-339, 342-343, 346-347, 350-351, 354-355, 358-359, 446 & 450-451)
- ROADS TO VEST (ROAD 17)

EXISTING MEMORANDUM OF EASEMENTS IN GROSS			
PURPOSE	SHOWN	SERVIENT TENEMENT (BURDENED LAND)	GRANTEE
RIGHT TO DRAIN WATER	ⓔ	LOT 354 HEREON	WHANGAREI DISTRICT COUNCIL



REV.	REVISION DETAILS	DATE	BY	APP.
E	STAGE 8A & 8B BDY CHANGE	31-01-23	KH	PC
D	STAGE CHANGES	12-10-22	KH	PC
C	LOT 360 SPLIT INTO TWO LOTS	29-03-22	KH	PC

PROJECT DETAILS

WFH PROPERTIES LIMITED
THE LANDING - STAGES 8 & 9
ONE TREE POINT
RUAKAKA

TITLE

SCHEME PLAN - STAGE 9
PROPOSED SUBDIVISION OF
LOTS 2000 & 2001 (STAGE 8B)
SHEET 8 OF 8

DATE CREATED	15/09/2021	DRAWN	K HANSARD	DESIGNED	R BROOKES	APPROVED	P COOK
CCL REF NO	14333-008	SCALE	1:1000 @ A3	STATUS	FOR CONSENT		
DWG NUMBER	SCH08		REVISION	E			

50 SCALE 1:1000

0 10 20 30 40 50 SCALE 1:1000