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64 Marlborough Street,
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8th November 2025

Ref: PAX91.323780 – 10 year planning permission for Ballinlee Wind Farm consisting of 17 no. wind turbines, a permanent 110kV substation and ancillary development located in Ballincurra, Ballingayrour, Ballinlee North & South, Ballinrea, Ballyreesode, Camas North & South, Carrigeen, Knockuregare, Ballybane and other townlands in County Limerick.

Dear Sir / Madam,

My name is Michael Ryan, I am a Chartered Surveyor with over 23 years' experience. Over 10 years of which is in the high voltage industry, including wind farms, solar farms, battery energy storage systems and substations. I wish to object to planning application for Ballinlee Wind Farm PAX91.323780. This planning application **does not** comply with either "Draft Revised Wind Energy Development Guidelines December 2019" or "Wind Energy Development Guidelines (2006)".

1. Wind Turbines are too close to Boundaries

On page 34 of Wind Energy Development Guidelines (2006) it states, *"a distance of not less than two rotor blades from adjoining property boundaries will generally be acceptable"*. The identical stipulation is on page 49 of Draft Revised Wind Energy Development Guidelines December 2019, *"a distance of not less than two rotor blades from adjoining property boundaries will generally be acceptable"*.

Two rotor blades is 136m long. The below 7 wind turbines, T1, T2, T3, T5, T6, T9 and T15 are all too close to adjoining boundaries.

Turbine	Distance from adjoining boundaries	Folio
T1	110m	LK13481
T2	110m	LK4858
T2	130m	LK7387F
T3	88m	LK12589
T3	82m	LK7387F
T5	128m	LK1992F
T6	80m	LK4915F
T9	104m	LK71
T15	81m	LK6256

2. Wind Turbines are too close together in Crosswind directions

On page 34 of Wind Energy Development Guidelines (2006) it states, "*to ensure optimal performance and to account for turbulence and wake effects, the minimum distances between wind turbines will generally be* ***three times the rotor diameter (=3d) in the crosswind direction***". The identical stipulation is on page 49 of Draft Revised Wind Energy Development Guidelines December 2019, *"to ensure optimal performance and to account for turbulence and wake effects, the minimum distances between wind turbines will generally* ***be three times the rotor diameter (=3d) in the crosswind direction****"*.

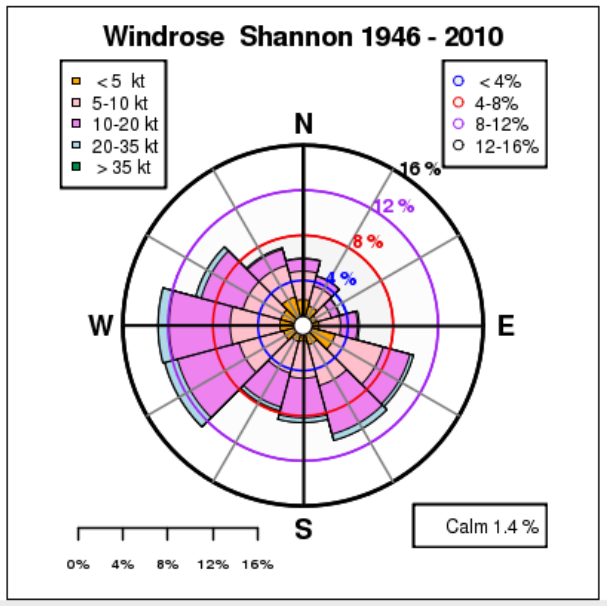
Three times the rotor diameter is 136m x 3 = 408m.

The below 3 wind turbine distances are too close together in crosswind direction.

1st Wind Turbine	2nd Wind Turbine	Distance between Turbines
T11	T12	380m
T8	T9	384m
T6	T7	406m

3. Wind Turbines are too close together in Prevailing Downwind Direction.

On page 34 of Wind Energy Development Guidelines (2006) it states, *"to ensure optimal performance and to account for turbulence and wake effects, the minimum distances between wind turbines will generally be three times the rotor diameter (=3d) in the crosswind direction and* ***seven times the rotor diameter (=7d) in the prevailing downwind direction.****"* The exact same stipulation is on page 49 of Draft Revised Wind Energy Development Guidelines December 2019, *"to ensure optimal performance and to account for turbulence and wake effects, the minimum distances between wind turbines will generally be three times the rotor diameter (=3d) in the crosswind direction and* ***seven times the rotor diameter (=7d) in the prevailing downwind direction.****"*



The Prevailing wind in the area is between 200 & 280 degrees.

Seven times the rotor diameter is 136m x 7 = 952m. The below 22 distances between wind turbines are less than seven times the rotor diameter (=7d) in the prevailing downwind direction.

1st Turbine	2nd Turbine	Distance between Turbines
T14	T15	329m
T4	T5	350m
T8	T10	364m
T13	T14	370m
T2	T3	399m
T1	T2	417m
T16	T17	430m
T9	T11	442m
T11	T16	446m
T12	T16	508m
T9	T12	559m
T14	T16	625m
T10	T13	644m
T13	T15	657m
T15	T17	657m
T1	T3	730m
T11	T13	813m
T8	T16	820m
T12	T17	837m
T11	T17	875m
T9	T16	876m
T15	T16	936m

4. Wind Turbines are too close to Overhead lines

Eirgrid's "Policy on Wind Turbine Clearances to OHL's", requires a minimum clearance of **3.5 times the wind turbine's rotor diameter** from existing overhead lines (OHLs).

3.5 times the rotor diameter is 136m x 3.5 = 476m. All Wind Turbines must be at least 476m from the 110kV Overhead Line.

Wind Turbine 1 is less than 3.5 times (only 456m) the wind turbine's rotor diameter from a 110kV Overhead Line.

Wind Turbine 2 is less than 3.5 times (427m) the wind turbine's rotor diameter from a 110kV Overhead Line.

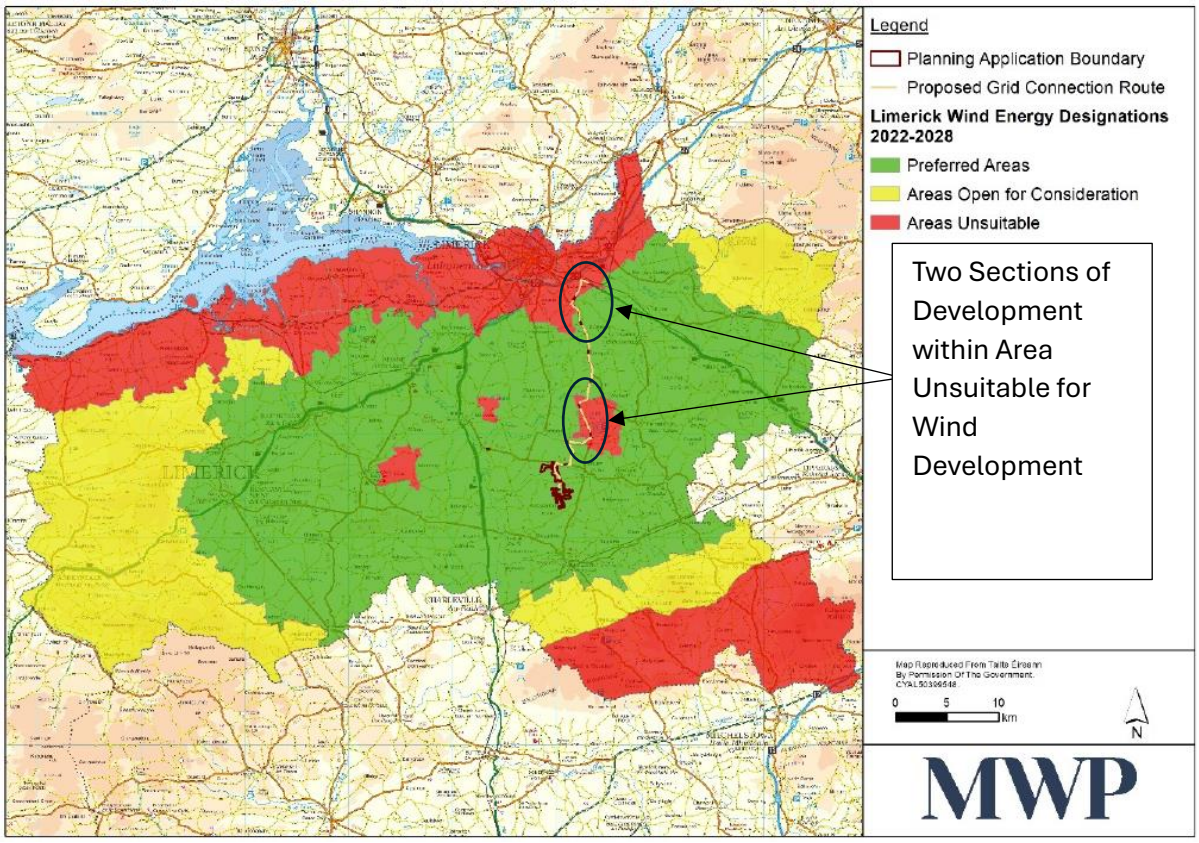
5. Wind Turbines are too close to Homes

On page 129 of Draft Revised Wind Energy Development Guidelines December 2019 it states, "*a setback distance for visual amenity purposes of 4 times the tip height should apply between a wind turbine and the nearest point of the curtilage of any residential property in the vicinity of the proposed development.*" 4 times the tip height is 160m x 4 = 640m.

House at ITM grid Coordinates X 559480 Y 633385 is only 531m from Wind Turbine 9. All homes must be a minimum of 4 times the tip height from a wind turbine, irrespective of who owns the home. The curtilage of house at ITM grid Coordinated X 560627 Y 632880 is less than a minimum of 4 times the tip height from a wind turbine.

6. Development is within an area not suitable for wind development

On page 2-10 of document "Chapter 02 Description of the Proposed Development" of the Main EIAR submitted by Ballinee Green Energy Ltd, two significant sections of this development is within "**Tier 3 - Unsuitable, Exclusion Zone, Not Normally Permissible Area.**" under the National Territory Mapping for Renewable Electricity Renewable Energy Directive III Article 15B - National Territory Mapping for Grid-Scale Onshore Wind in Ireland.



On page 41 of "Draft Revised Wind Energy Development Guidelines December 2019" it states, *"The Irish Courts have determined the need to assess such projects comprising both the wind energy development element and the subsequent grid connection element, as a single project".*

Therefore, this project is within an area exclusion zone and planning permission must be refused.

7. Wind Turbines

Wind Turbine 1

Wind Turbine 1 is, firstly, too close to an adjoining boundary. Wind Turbine 1 is only 110m from an adjoining boundary, this must be at least 136m.

Wind Turbine 1 is, secondly, only 417m in the prevailing downwind direction of Wind Turbine 2. This must be at least 952m.

Thirdly, Wind Turbine 1 is only 730m in the prevailing downwind direction of Wind Turbine 3. This must be at least 952m.

Wind Turbine 2

Wind Turbine 2 is firstly, too close to two adjoining boundaries.

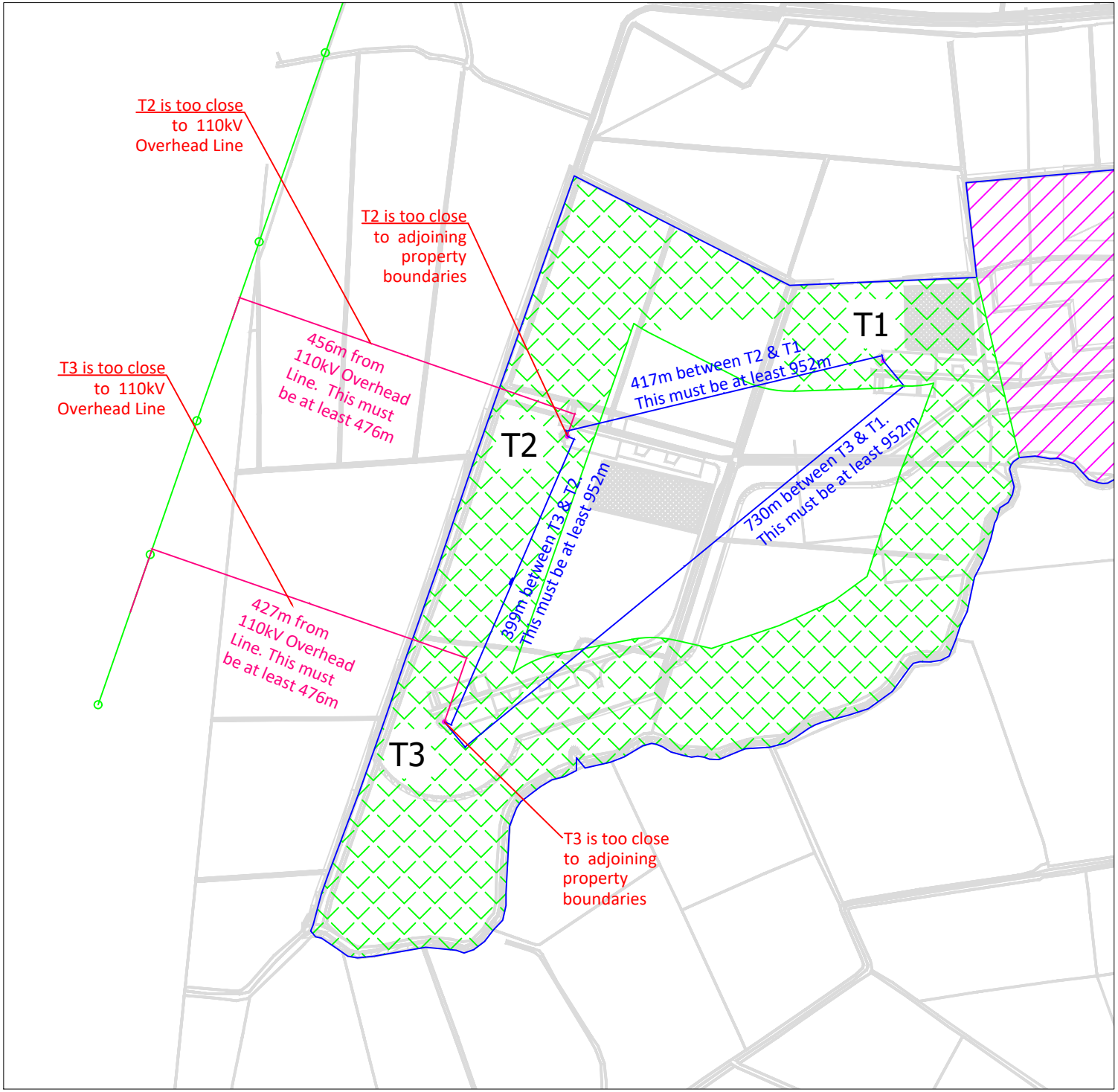
Secondly, too close to an 110kV Overhead line.

And thirdly, it is only 399m in the prevailing downwind direction of Wind Turbine 3.

Wind Turbine 3

Wind Turbine 3 is too close to two adjoining boundaries, and secondly, too close to an 110kV Overhead line.

See Attached Drawing Nr. 1 relating to Wind Turbines 1, 2 & 3.



Site Boundary

Area within 4 times Turbine Tip Height from houses.

Area within 1 rotor blade of adjacent property.

Note 1: Wind Turbines must be 4 t*imes the tip height from the curtilage of neighbouring homes.*

Note 2: The minimum distance between wind turbines is 3 times the rotor diameter in the crosswind direction.

Note 3: The minimum distance between wind turbines is 7 times the rotor diameter in the prevailing downwind direction.

Note 4. Wind Turbines must be 3.5 times the rotor diameter from 110kV Overhead Line.

Note 5: Wind Turbines must be 2 rotor lengths from adjoining properties.

Drawing Nr. 1

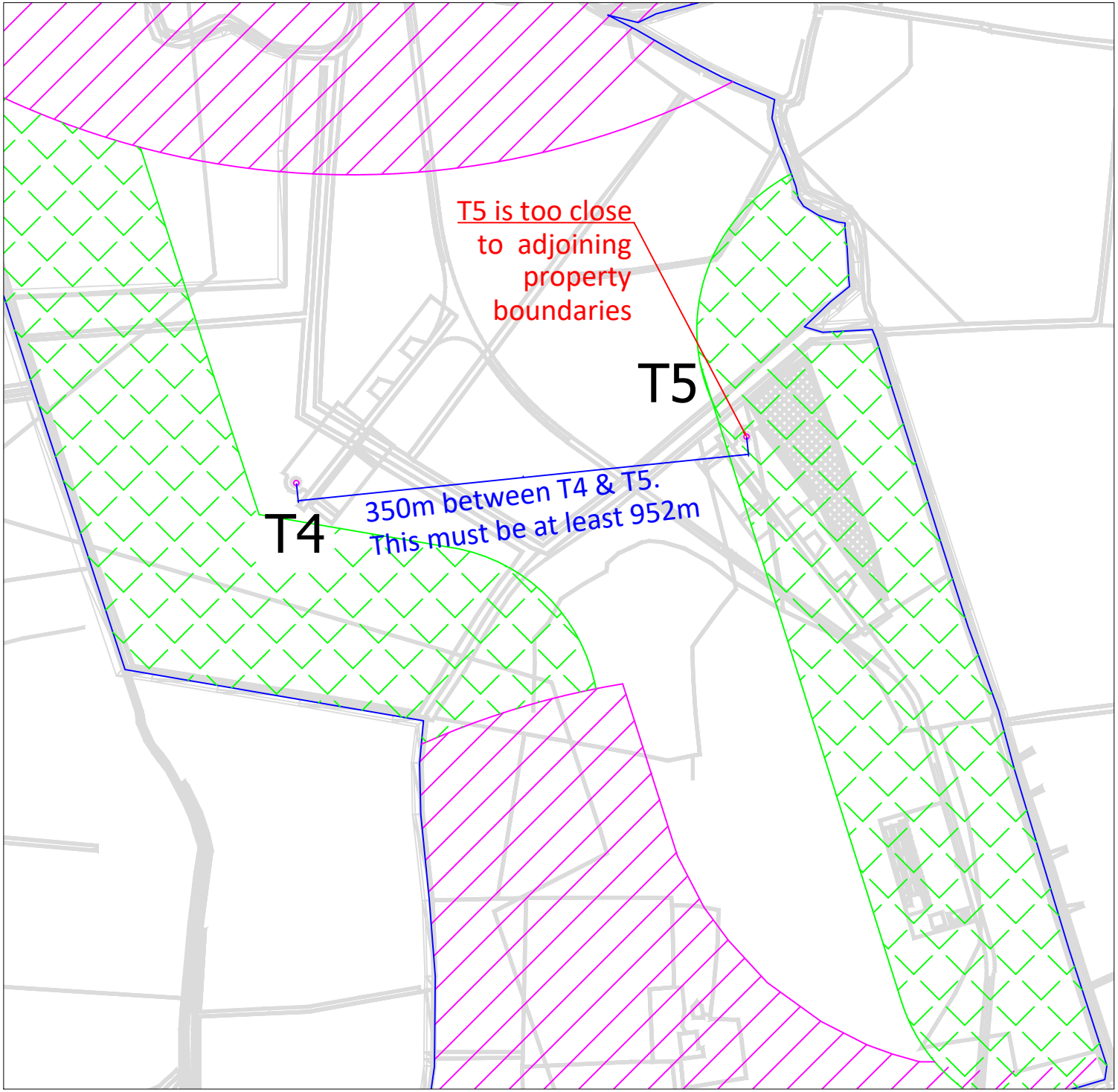
Turbine 1 - 3

Wind Turbine 5

Wind Turbine 5 is only 350m in the prevailing downwind direction of Wind Turbine 4. This must be at least 952m.

Wind Turbine 5 is too close to an adjoining boundary.

See Attached Drawing Nr. 2 relating to Wind Turbines 4 & 5.



Site Boundary

Area within 4 times Turbine Tip Height from houses.

Area within 1 rotor blade of adjacent property.

Note 1: Wind Turbines must be 4 t*imes the tip height from the curtilage of neighbouring homes.*

Note 2: The minimum distance between wind turbines is 3 times the rotor diameter in the crosswind direction.

Note 3: The minimum distance between wind turbines is 7 times the rotor diameter in the prevailing downwind direction.

Note 4. Wind Turbines must be 3.5 times the rotor diameter from 110kV Overhead Line.

Note 5: Wind Turbines must be 2 rotor lengths from adjoining properties.

Drawing Nr. 2

Turbine 4 - 5

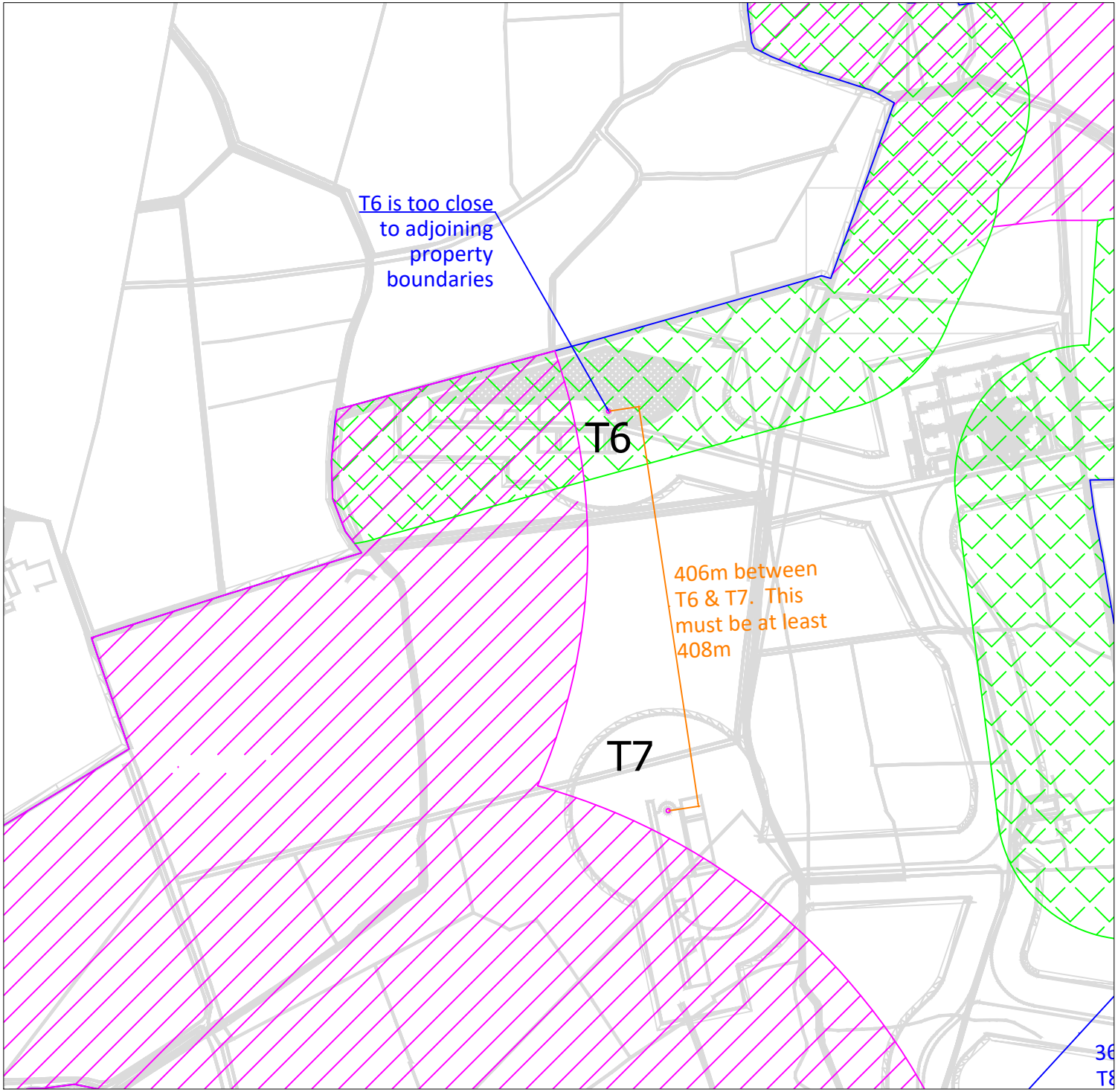
Turbine 6

Wind Turbine 6 is too close to an adjoining boundary.

Turbine 7

Wind Turbine 7 is within 3 rotor diameters of Turbine 6 in a cross-wind direction.

See Attached Drawing Nr. 3 relating to Wind Turbines 6 & 7.



Site Boundary

Area within 4 times Turbine Tip Height from houses.

Area within 1 rotor blade of adjacent property.

Note 1: Wind Turbines must be 4 t*imes the tip height from the curtilage of neighbouring homes.*

Note 2: The minimum distance between wind turbines is 3 times the rotor diameter in the crosswind direction.

Note 3: The minimum distance between wind turbines is 7 times the rotor diameter in the prevailing downwind direction.

Note 4. Wind Turbines must be 3.5 times the rotor diameter from 110kV Overhead Line.

Note 5: Wind Turbines must be 2 rotor lengths from adjoining properties.

Drawing Nr. 3

Turbine 6 - 7

Wind Turbine 8

Wind Turbine 8 is within 3 rotor diameters of Turbine 9 in a cross-wind direction.

Wind Turbine 9

Wind Turbine 9 is too close to an adjoining boundary.

Wind Turbine 9 is within 4 times the Tip Height of a house.

Wind Turbine 10

Wind Turbine 10 is only 364m in the prevailing downwind direction of Wind Turbine 8. This must be at least 952m.

Wind Turbine 11

Wind Turbine 11 is only 442m in the prevailing downwind direction of Wind Turbine 9. This must be at least 952m.

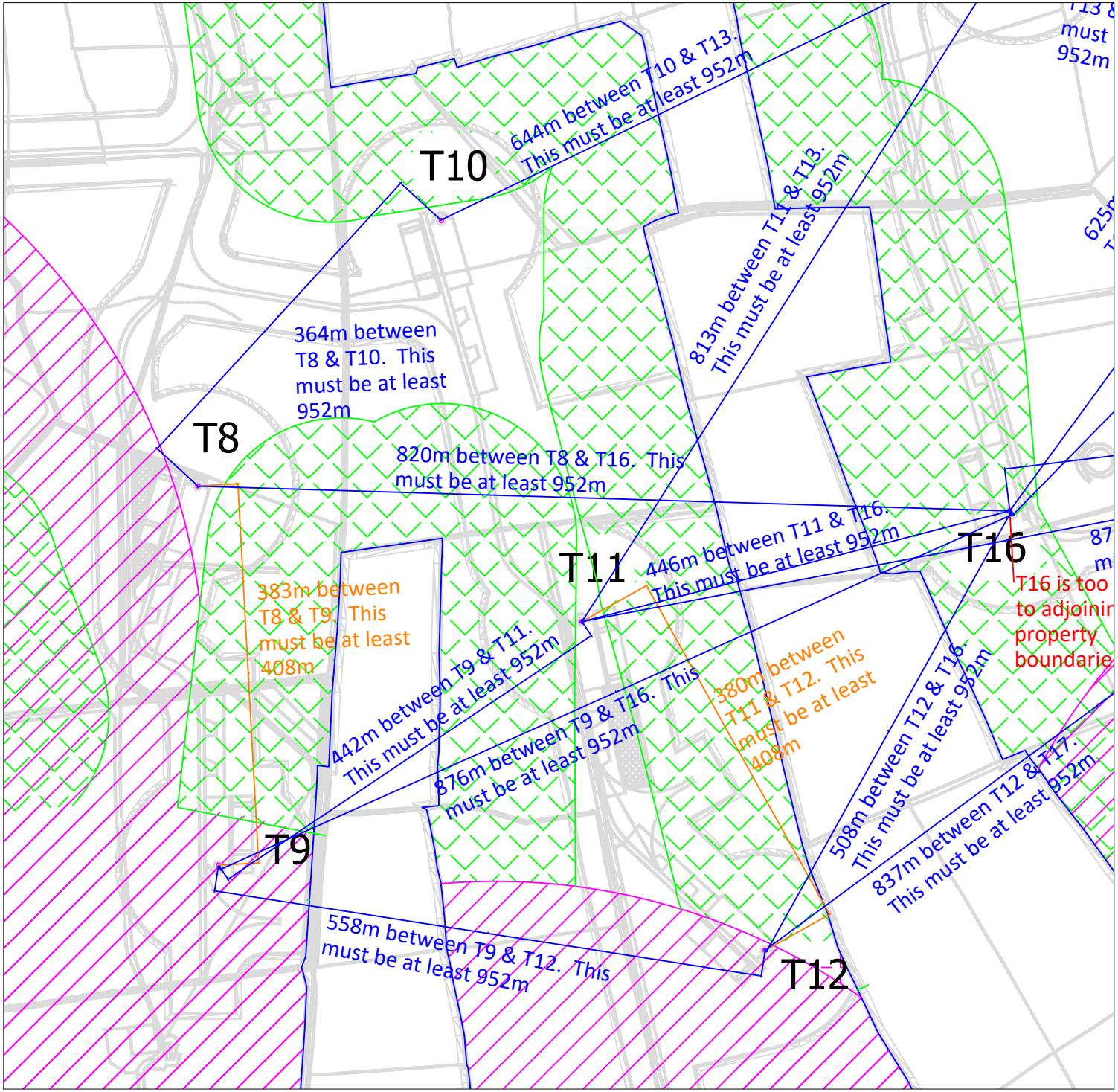
Wind Turbine 11 is within 3 rotor diameters of Turbine 12 in a cross-wind direction.

Wind Turbine 12

Wind Turbine 12 is only 559m in the prevailing downwind direction of Wind Turbine 9. This must be at least 952m.

Wind Turbine 12 is too close to an adjoining boundary.

See Attached Drawing Nr. 4 relating to Wind Turbines 8 to 12.



Site Boundary

Area within 4 times Turbine Tip Height from houses.

Area within 1 rotor blade of adjacent property.

Note 1: Wind Turbines must be 4 t*imes the tip height from the curtilage of neighbouring homes.*

Note 2: The minimum distance between wind turbines is 3 times the rotor diameter in the crosswind direction.

Note 3: The minimum distance between wind turbines is 7 times the rotor diameter in the prevailing downwind direction.

Note 4. Wind Turbines must be 3.5 times the rotor diameter from 110kV Overhead Line.

Note 5: Wind Turbines must be 2 rotor lengths from adjoining properties.

Drawing Nr. 4

Turbine 8 - 12

Wind Turbine 13

Wind Turbine 13 is only 644m in the prevailing downwind direction of Wind Turbine 10. This must be at least 952m.

Wind Turbine 13 is only 813m in the prevailing downwind direction of Wind Turbine 11. This must be at least 952m.

Wind Turbine 14

Wind Turbine 14 is only 370m in the prevailing downwind direction of Wind Turbine 13. This must be at least 952m.

Wind Turbine 14 is only 625m in the prevailing downwind direction of Wind Turbine 16. This must be at least 952m.

Wind Turbine 15

Wind Turbine 15 is too close to an adjoining boundary.

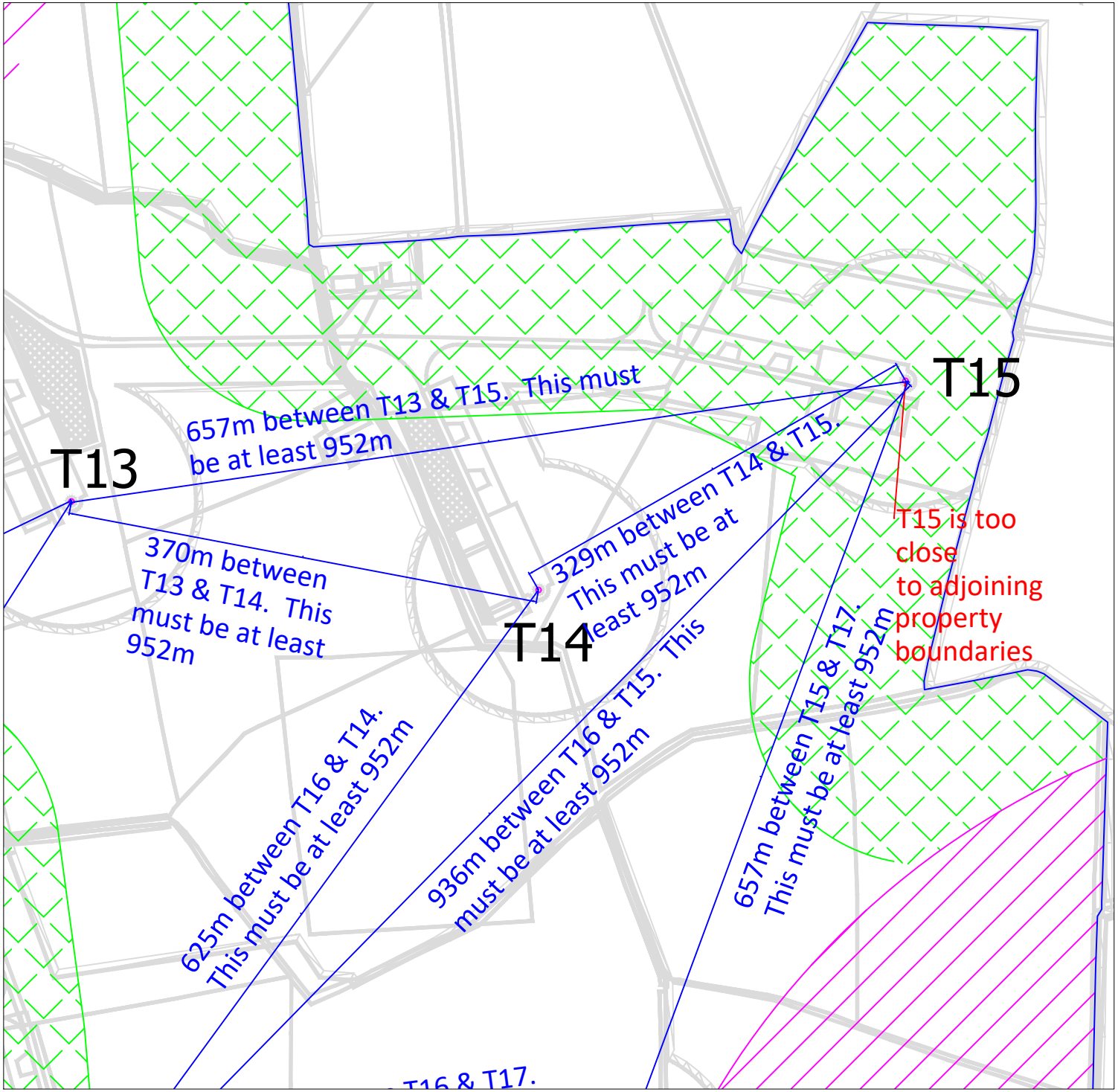
Wind Turbine 15 is only 329m in the prevailing downwind direction of Wind Turbine 14. This must be at least 952m.

Wind Turbine 15 is only 657m in the prevailing downwind direction of Wind Turbine 13. This must be at least 952m.

Wind Turbine 15 is only 936m in the prevailing downwind direction of Wind Turbine 16. This must be at least 952m.

Wind Turbine 15 is only 657m in the prevailing downwind direction of Wind Turbine 17. This must be at least 952m.

See Attached Drawing Nr. 5 relating to Wind Turbines 13 - 15.



Site Boundary

Area within 4 times Turbine Tip Height from houses.

Area within 1 rotor blade of adjacent property.

Note 1: Wind Turbines must be 4 t*imes the tip height from the curtilage of neighbouring homes.*

Note 2: The minimum distance between wind turbines is 3 times the rotor diameter in the crosswind direction.

Note 3: The minimum distance between wind turbines is 7 times the rotor diameter in the prevailing downwind direction.

Note 4. Wind Turbines must be 3.5 times the rotor diameter from 110kV Overhead Line.

Note 5: Wind Turbines must be 2 rotor lengths from adjoining properties.

Drawing Nr. 5

Turbine 13 - 15

Wind Turbine 16

Wind Turbine 16 is too close to an adjoining boundary.

Wind Turbine 16 is only 446m in the prevailing downwind direction of Wind Turbine 11. This must be at least 952m.

Wind Turbine 16 is only 508m in the prevailing downwind direction of Wind Turbine 12. This must be at least 952m.

Wind Turbine 16 is only 820m in the prevailing downwind direction of Wind Turbine 8. This must be at least 952m.

Wind Turbine 16 is only 876m in the prevailing downwind direction of Wind Turbine 9. This must be at least 952m.

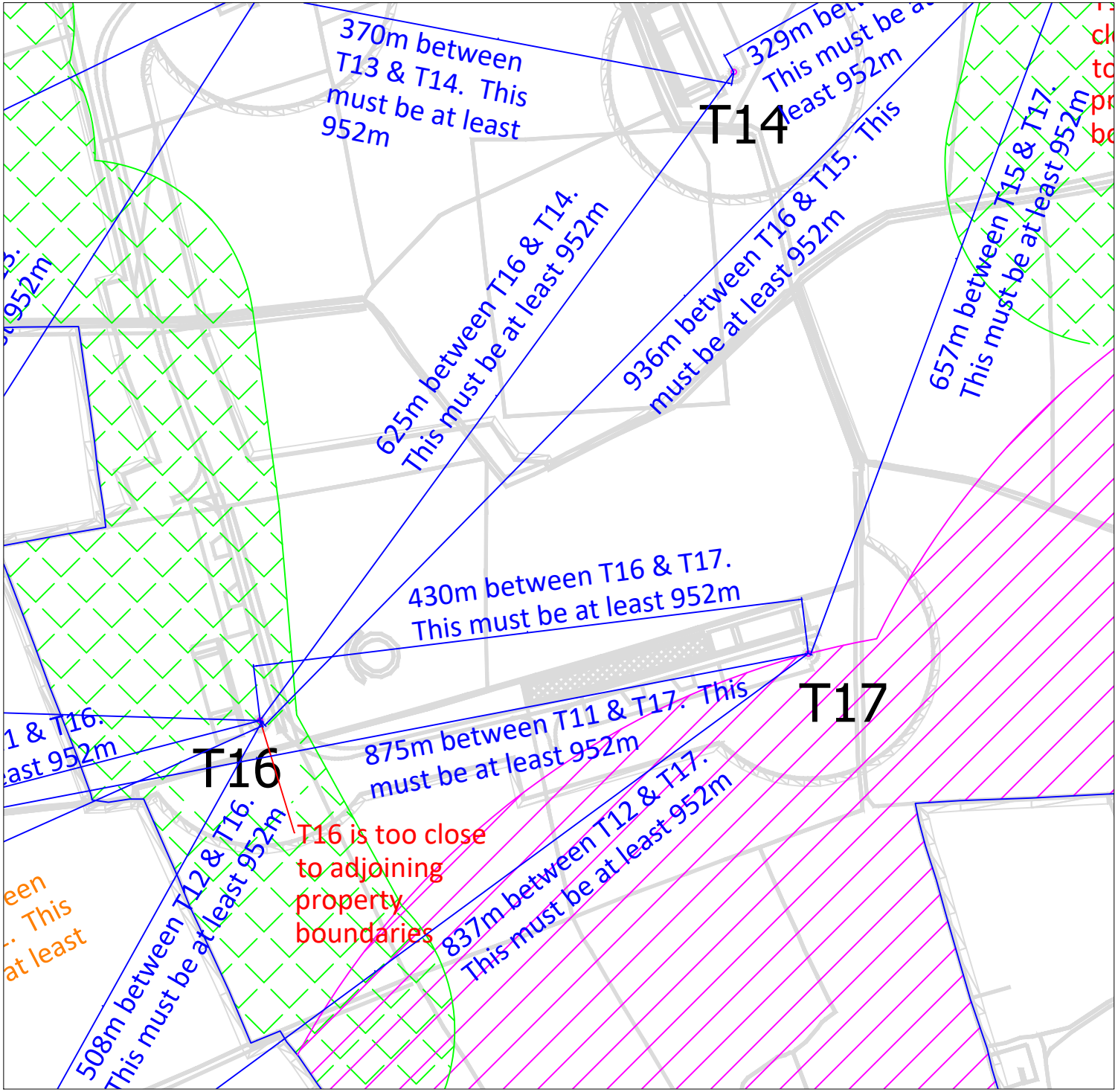
Wind Turbine 17

Wind Turbine 17 is only 430m in the prevailing downwind direction of Wind Turbine 16. This must be at least 952m.

Wind Turbine 17 is only 875m in the prevailing downwind direction of Wind Turbine 11. This must be at least 952m.

Wind Turbine 17 is only 837m in the prevailing downwind direction of Wind Turbine 12. This must be at least 952m.

See Attached Drawing Nr. 6 relating to Wind Turbines 16 - 17.



Site Boundary

Area within 4 times Turbine Tip Height from houses.

Area within 1 rotor blade of adjacent property.

Note 1: Wind Turbines must be 4 t*imes the tip height from the curtilage of neighbouring homes.*

Note 2: The minimum distance between wind turbines is 3 times the rotor diameter in the crosswind direction.

Note 3: The minimum distance between wind turbines is 7 times the rotor diameter in the prevailing downwind direction.

Note 4. Wind Turbines must be 3.5 times the rotor diameter from 110kV Overhead Line.

Note 5: Wind Turbines must be 2 rotor lengths from adjoining properties.

Drawing Nr. 6

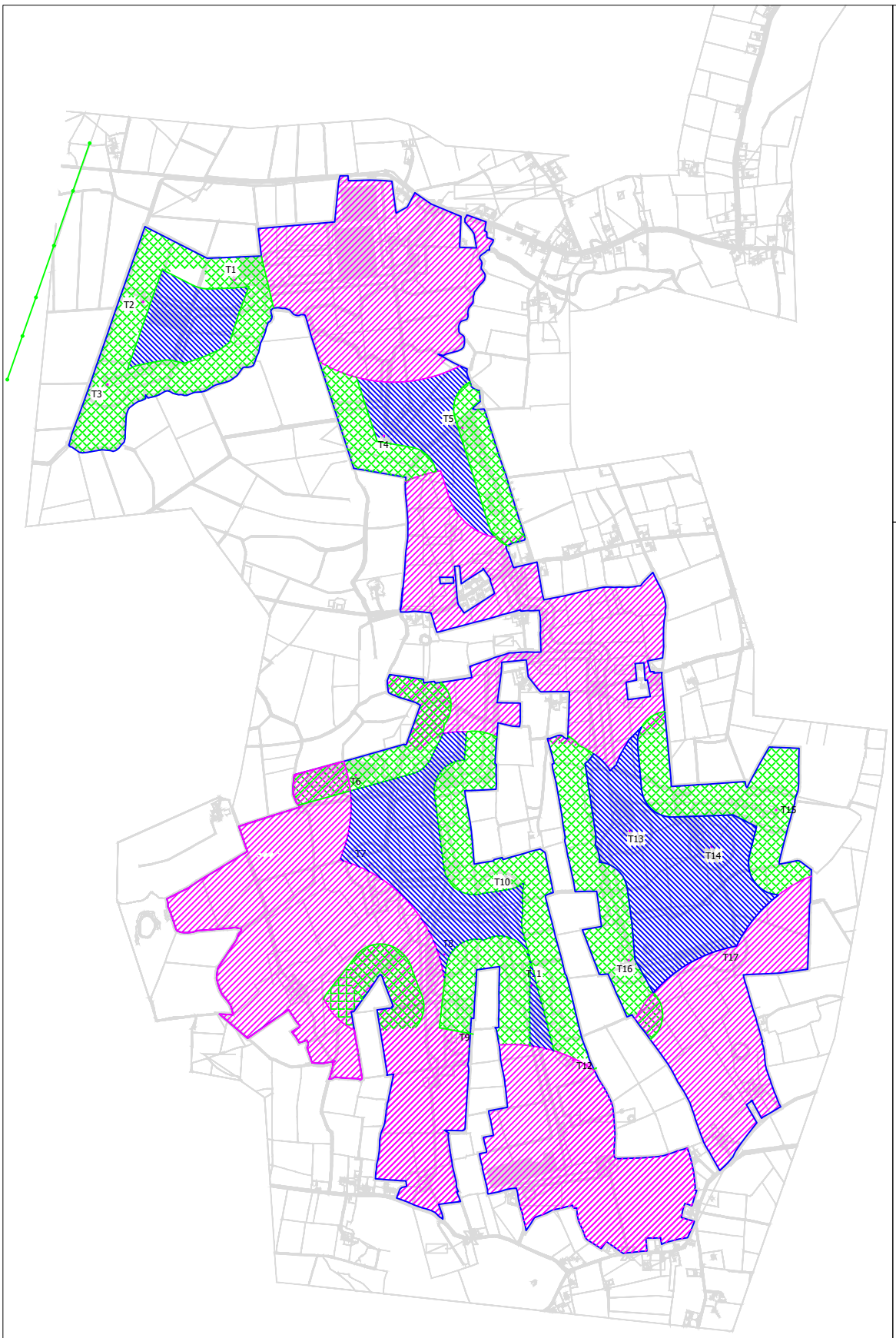
Turbine 16 - 17

7. Usable Area

Drawing Nr 7 highlights that the actual usable area on the site where wind turbines can be place is very small, when the setback distances from homes and the distance from adjoining property boundaries is taken into consideration.

The attached drawing Nr. 7 shows the area in pink, which is too close to homes, the area in green which is too close to adjoining properties and the very small area where wind turbines are actually possible in blue.

See Attached Drawing Nr. 7 relating to Usable Area of Site.



Site Boundary

Area within 4 times Turbine Tip Height from houses.

Area within 1 rotor blade of adjacent property.

Usable Area

Drawing Nr. 7

Useable Area

8. Conclusion

1. Wind Turbines must be setback a distance of 4 times the tip height from the nearest point of the curtilage of any residential property.
2. Wind Turbines cannot be placed within two rotor blades from adjoining property boundaries.
3. Wind Turbines must be 3.5 times the rotor diameter from a 110kV Overhead Line.
4. Wind Turbines must be a minimum distance of three times the rotor diameter (=3d) in the crosswind direction from any other wind turbine.
5. Wind Turbines must be a minimum distance apart of seven times the rotor diameter (=7d) in the prevailing downwind direction.

When taking the above 5 facts into consideration, ***It impossible to fit 17 wind turbines on this site. The absolute maximum is 6 wind turbines.***

One Turbine 200m east of T2's current location.

One Turbine between T4 & T5's current location.

One Turbine at between T6 & T7's current location.

One Turbine between T8, T10 & T11's current locations.

One Turbine at T13 & T14's current location.

One Turbine between T16 & T17's current location.

Also, the project is within an area zoned "Tier 3 - Unsuitable, Exclusion Zone, Not Normally Permissible Area."

You must decline planning permission for this development.

Regards,

Michael Ryan

Michael Ryan B.Sc. (Hons), MSCSI, MRICS, Dip. Proj. Mgmt.